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HENDERSON'S IMPLEMENT AND LAWN CATALOGUE

PETER HENDERSON & CO.
35 and 37 Cortlandt Street, New York

HENDERSON'S 1917 CATALOGUE

Implements - Tools - Requisites - Fertilizers - Insecticides, Etc.

For the Garden, Greenhouse, Lawn, Orchard and Farm.

ALSO -

Everything for the Lawn, Golf Course, Athletic Grounds, Etc.

Lawn Grass Seed Mixtures and Lawn Grasses in Variety.

BUSINESS RULES.

ORDERING, REMITTING, ACCOUNTS, FORWARDING, ETC.

Prices in this Catalogue cancel all previous offers unless accepted by us.

The prices quoted in this Catalogue are net for the articles packed and delivered to transportation companies in New York City, freight or expressage to be paid by consignee. Freight and express rates will be found the most economical except in a few instances so we have only given the packed weight up to 10 lbs. Some Tools and Requisites, Insecticides and Fertilizers may be forwarded by U. S. Parcel Post. All mailable are indicated by the abbreviations "P.P." or "mail weight," and the packed weight up to 10 lbs. is given so that postage may be calculated by the "Zone Rate" below AND ADDED TO THE AMOUNT OF THE ORDER. Special packing for Foreign Shipment will be charged at cost. We deliver free by Parcel Post, express or freight, at our option all Lawn Grass Seeds

THE PRICES QUOTED IN THIS CATALOGUE ARE NET—We offer no premiums, discounts nor gratuities. We reserve the right to advance prices without notice should current conditions require it.

PETER HENDERSON & CO. give no warranty, express or implied, as to description, quality, productiveness, or any other matter of any Seeds, Bulbs, Roots or Plants they send out, and they will not be in any way responsible for the crop. If the purchaser does not accept the goods on these terms, they are at once to be returned.

REMITTANCES may be made by Express Money Order, P. O. Money Order or Bank Draft; if stamps or cash send in a Registered Letter. We must decline sending goods C. O. D. unless 25 per cent. of their value accompanies the order. Plants we do not ship C. O. D.

ACCOUNTS—Parties having no account with us—who order goods without remittance—must furnish satisfactory reference. New York City reference preferred on account of the shorter delay pending investigation.

WE MAKE NO CHARGE FOR SHIPPING AND CARTING of goods to any railroad station, steamship line or express office in New York City proper.

WE MAKE NO CHARGE FOR PACKING, except special for foreign shipments, as tin-lined cases, double sacks, etc., then we charge cost. Cloth bags we charge for, viz.: 1 peck, 10c.; $\frac{1}{2}$ bushel, 12c.; 1 bushel, 15c.; 2 bushels, 25c. All Grass Seed bags are furnished free excepting for Timothy and Clover.

PARCEL POST AND EXPRESS.

On shipments weighing 20 pounds or more it is cheaper to ship by express. As the express companies give a receipt for each package, and are responsible, it amounts practically to insurance without cost, whereas it costs extra, according to value, to insure a parcel post package. We guarantee the safe arrival in the U. S. of all goods shipped by express.

LAWN GRASS SEED MIXTURES.

We deliver quarts and pecks free in the U. S. by parcel post or express at our option. We also deliver free in the U. S.

by parcel post, express or freight (our choice) all
Lawn Grass Seeds in larger quantities.

For other merchandise mailable by Parcel Post offered in this catalogue—Tools and Accessories, Odorless Fertilizers, Insecticides and Fungicides (Fluids and Poisons excluded)—we have given the packed weight so that extra for postage may be remitted according to Zone distances.

WEIGHT LIMIT—The weight limit within the 1st and 2nd Zones is fifty (50) pounds, within the other Zones the weight limit is twenty (20) pounds and the size limit eighty-four (84) inches for combined length and largest girth. In this catalogue we give the weight packed up to ten (10) pounds on Implements, Insecticides and Fertilizers.

Weight in Pounds	Local	ZONES							
		1st Up to 50 miles from New York	2nd 50 to 150 miles from New York	3rd 150 to 300 miles from New York	4th 300 to 600 miles from New York	5th 600 to 1000 miles from New York	6th 1000 to 1400 miles from New York	7th 1400 to 1800 miles from New York	8th Over 1800 miles from New York
1	\$0.05	\$0.05	\$0.05	\$0.06	\$0.07	\$0.08	\$0.09	\$0.11	\$0.12
2	.06	.06	.06	.08	.11	.14	.17	.21	.24
3	.06	.07	.07	.10	.15	.20	.25	.31	.36
4	.07	.08	.08	.12	.19	.26	.33	.41	.48
5	.07	.09	.09	.14	.23	.32	.41	.51	.60
6	.08	.10	.10	.16	.27	.38	.49	.61	.72
7	.08	.11	.11	.18	.31	.44	.57	.71	.84
8	.09	.12	.12	.20	.35	.50	.65	.81	.96
9	.09	.13	.13	.22	.39	.56	.73	.91	1.08
10	.10	.14	.14	.24	.43	.62	.81	1.01	1.20
11	.10	.15	.15	.26	.47	.68	.89	1.11	1.32
12	.11	.16	.16	.28	.51	.74	.97	1.21	1.44
13	.11	.17	.17	.30	.55	.80	1.05	1.31	1.56
14	.12	.18	.18	.32	.59	.86	1.13	1.41	1.68
15	.12	.19	.19	.34	.63	.92	1.21	1.51	1.80
16	.13	.20	.20	.36	.67	.98	1.29	1.61	1.92
17	.13	.21	.21	.38	.71	1.04	1.37	1.71	2.04
18	.14	.22	.22	.40	.75	1.10	1.45	1.81	2.16
19	.14	.23	.23	.42	.79	1.16	1.53	1.91	2.23
20	.15	.24	.24	.44	.83	1.22	1.61	2.01	2.40
21	.15	.25	.25						
22	.16	.26	.26						
23	.16	.27	.27						
24	.17	.28	.28						
25	.17	.29	.29						
26	.18	.30	.30						
27	.18	.31	.31						
28	.19	.32	.32						
29	.19	.33	.33						
30	.20	.34	.34						
31	.20	.35	.35						
32	.21	.36	.36						
33	.21	.37	.37						
34	.22	.38	.38						
35	.22	.39	.39						
36	.23	.40	.40						
37	.23	.41	.41						
38	.24	.42	.42						
39	.24	.43	.43						
40	.25	.44	.44						
41	.25	.45	.45						
42	.26	.46	.46						
43	.26	.47	.47						
44	.27	.48	.48						
45	.27	.49	.49						
46	.28	.50	.50						
47	.28	.51	.51						
48	.29	.52	.52						
49	.29	.53	.53						
50	.30	.54	.54						

IMPORTANT—In remitting postage always add it to the foot of the order as a separate item—this will help to avoid mistakes.

Your local postmaster will inform you what Zone you are in from New York City, if you are in doubt, and you can add for postage accordingly.

INTERNATIONAL PARCEL POST

We forward Seeds to any postoffice in foreign countries by International Parcel Post when mail routes are open. Full details in our "INTERNATIONAL PARCEL POST CIRCULAR" mailed on application.

Domestic Parcel Post rates (8th Zone) apply to Alaska, the Canal Zone, Guam, Hawaii, Porto Rico and the Philippine Islands.

PETER HENDERSON & CO., 35 and 37 Cortlandt Street, NEW YORK

MCILROY & EMMET, 22 THAMES STREET, NEW YORK.

MAR 20 1917

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MAR 20 1917

PARCEL POST ZONE
FROM N.Y. CITY

ORDER SHEET FOR IMPLEMENTS,

LAWN GRASS SEED MIXTURES, ETC., ETC.

PETER HENDERSON & CO., 35 & 37 Cortlandt St., New York.

Route shipped by _____, Date shipped 1917.

In _____ Pkgs.; _____ Bundles; _____ Boxes; _____ Crates; _____ Baskets; _____ Bbls.; _____ Bags.

The following articles will be sent later

Laid out by _____; Checked by _____; Reply required by _____

(PLEASE DO NOT WRITE IN THIS SPACE.)

ADD POSTAGE FOR GOODS WANTED BY PARCEL POST

We offer in this Catalogue, tools and accessories, orderless fertilizers, insecticides, etc.—that may be forwarded by U. S. Parcel Post, but extra for postage calculated by the "Zone Rate" must be added to the amount of the order. (See second page of cover.)

WE DO NOT OFFER ANY PREMIUMS OR DISCOUNTS. OUR PRICES ARE NET

Total Amount of Order,

Index of Implements, Tools, Requisites, Fertilizers, Insecticides, etc.

Apple Parer.....	22	Frames, Hot Bed.....	18	Knapsack Sprayers.....	47	Plant Protectors.....	17	Sod Cutter.....	35
Asparagus Buncher.....	22	Fruit Pickers.....	23	Knives—Asparagus.....	22	“ Sprinklers—Rubber.....	26	“ Lifter.....	28
“ Knives.....	22	“ Driers.....	21	“ Beet Topping.....	22	“ Supports.....	26	“ Cultivator.....	35
Axes.....	22	Fumigators.....	48	“ Border.....	23	Plows Horse Power.....	2 to 4	“ Perforator.....	35
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“ Mattock.....	25	Garden Line and Reels.....	23	“ Budding & Pruning.....	24	Post Hole Diggers.....	26	Spades.....	28
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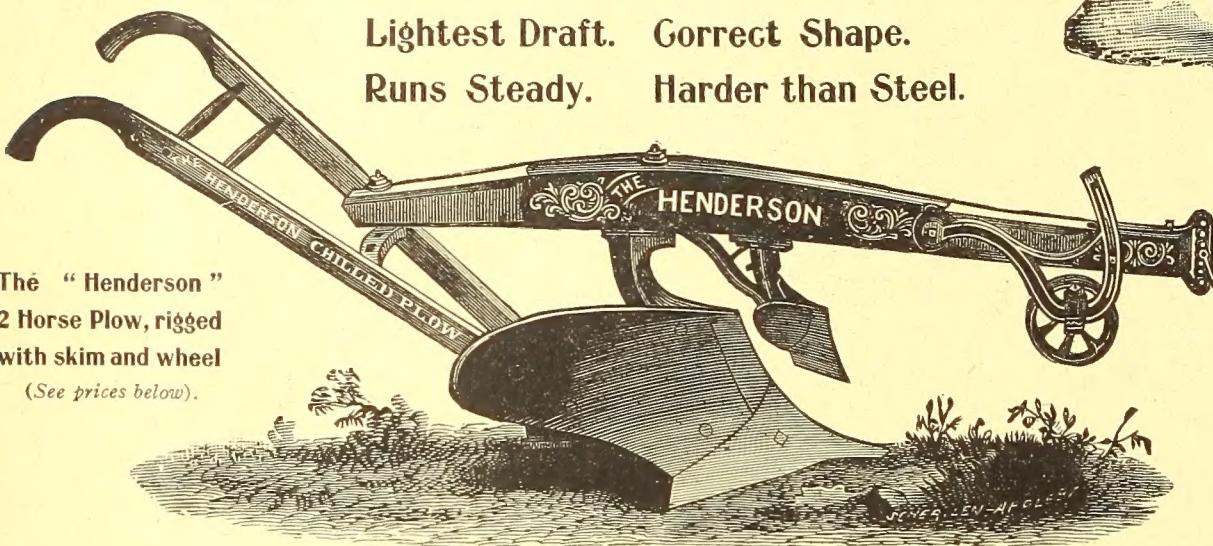
We deliver quarts and pecks of Lawn Grass Mixtures: FREE in the U. S. by parcel post or express at our option.

We also deliver FREE in the U. S. by parcel post, express or freight
(our choice) all Lawn Grass Seeds in larger quantities.

THE "HENDERSON"

CHILLED PLOWS.

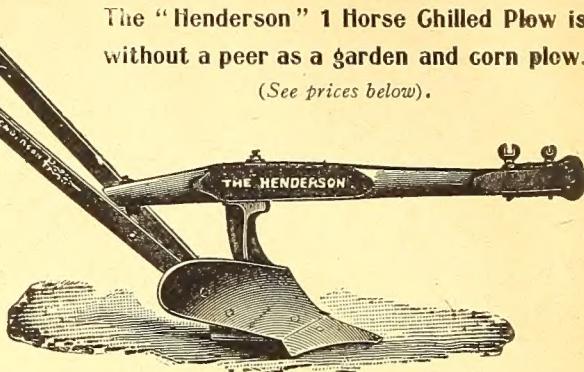
Lightest Draft. Correct Shape.
Runs Steady. Harder than Steel.



The "Henderson"
2 Horse Plow, rigged
with skim and wheel

(See prices below).

The "Henderson" 1 Horse Chilled Plow is
without a peer as a garden and corn plow.
(See prices below).



THE "HENDERSON" CHILLED PLOWS

Do Grand Work in all Soils, Sod
or Stubble.

The outlines and shape are
exactly right to do perfect
work with the least draft, and
with the greatest ease to the
plowman.

THE CHILLED MOLDBOARDS are harder than tempered steel. The effects of exposure to weather will be obliterated by turning a few feet of soil leaving the surface like glass; they will scour in any soil from sharp gravel to muck.

THE CUTTING EDGE, OR "SHIN PIECE," is separate from the mouldboard (on all sizes larger than Medium One Horse), and can be taken off and ground sharp or be replaced by a new one at small cost, making an old plow as good as new.

THE LANDSIDE inclines at the bottom away from unplowed ground, thereby avoiding unnecessary friction and reducing the draft, besides cutting a furrow of such a shape that it falls by its own weight as soon as it passes a perpendicular position, thereby relieving the plow of that much pressure.

THE STANDARD is placed inside of the cutting line, and is of such a shape that it does not choke.

THE HEEL OF THE BEAM is adjustable on a slotted brace between the handles, so that the plow can be regulated to make a lapped, flat, small or large furrow. Thus a perfect center draft may always be maintained. It is also a desirable feature in one-horse plows, as it allows the horse to walk in the furrow when desired.

THE WHEEL can be swiveled to run in a direct line with the plow, no matter which way the beam is shifted; this makes the plow draw always perfectly true.

THE JOINTER OR SKIM turns under all weeds, manure, stubble and surface soil, making a miniature furrow over which the main furrow is thrown, so that it breaks over, cracking, opening, and thereby mellowing the soil by its better exposure to the air.

THE HENDERSON CHILLED PLOWS are honestly made of best materials, correctly shaped and balanced to do grand work. Easy on both team and plowman, and we are certain they are not surpassed by any other make.

No.	Sizes of the "Henderson" Chilled Plow.	Price Plain.	With Wheel.	With Wheel and Jointer.	Solid Share.	Mold- board.	Land- side.	Standard.			
A	Light, one horse..... Cuts a furrow 4 1/2 by 9 inch.	\$6.50	.....	.....	.35	3 lb.	\$1.25	8 lb.	.45	5 lb.	\$1.50
B	Medium, one horse..... " 5 " 10 "	8.00	\$9.00	.....	.35	3 lb.	1.45	8 lb.	.50	5 lb.	1.50
13	Full, one horse..... " 5 1/2 " 11 "	9.50	10.50	.....	.40	5 lb.	2.00		.75	10 lb.	2.25
23	Medium, two horse..... " 7 " 13 "	12.00	13.00	\$15.00	.50	8 lb.	2.50		1.00		2.75
E	Full, two horse..... " 8 " 14 "	14.00	15.00	17.00	.55	9 lb.	3.00		1.25		3.25

An extra Share goes with each plow. A Wrench free with each plow.

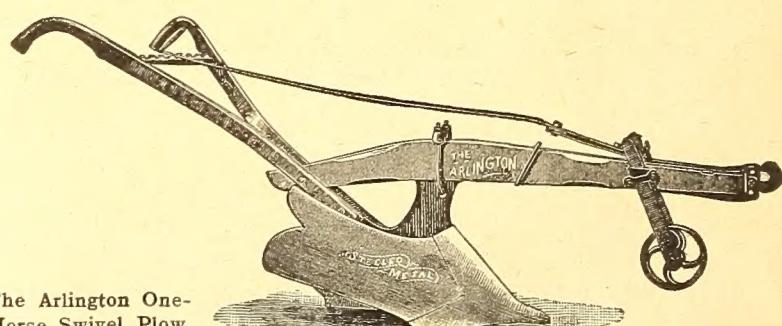
THE ARLINGTON ONE-HORSE SWIVEL PLOW.

The Arlington Plow has become a favorite in many sections. They are made with Steel Shifting Lever with Clevis, also Patent Spring Foot Latch.

Mold-boards are made of Patent Steeled Metal, and all castings nicely polished. The Beam and Handles are made from Selected stock, neatly striped and varnished.

Their general neatness of appearance, light weight, and exceptionally good work in the field, whether on flat land or hillside, command them to all desirous of handling a perfect plow.

Prices: No. 27, plain, \$10.00; with wheel, \$11.25; with wheel and cutter, \$13.25.

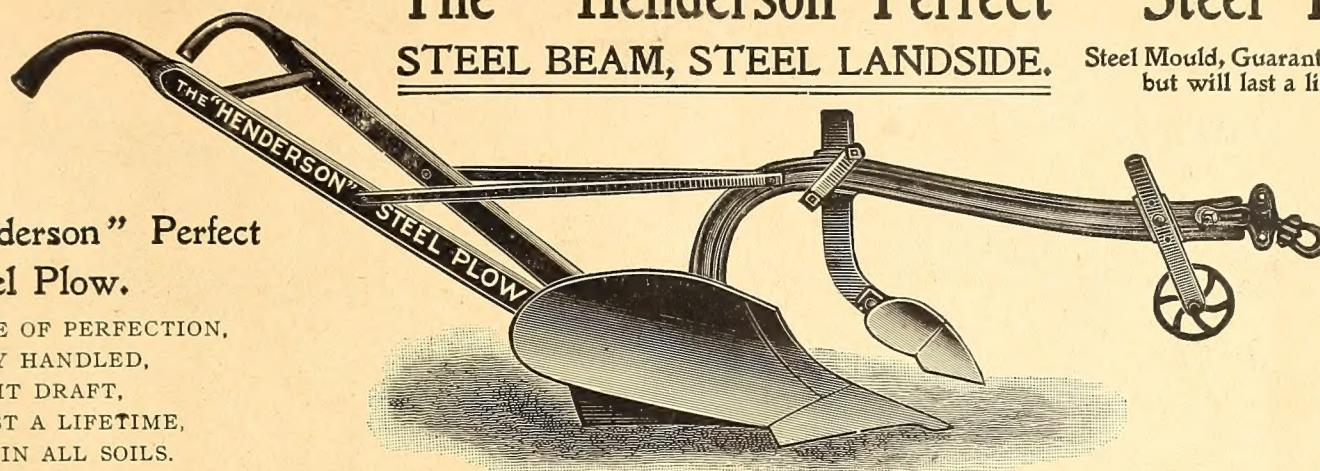


The Arlington One-Horse Swivel Plow.

The "Henderson Perfect" Steel Plow.

STEEL BEAM, STEEL LANDSIDE.

Steel Mould, Guaranteed 5 Years
but will last a lifetime.



The "Henderson" Perfect Steel Plow.

IS THE ACME OF PERFECTION,
EASILY HANDLED,
LIGHT DRAFT,
WILL LAST A LIFETIME,
SCOURS IN ALL SOILS.

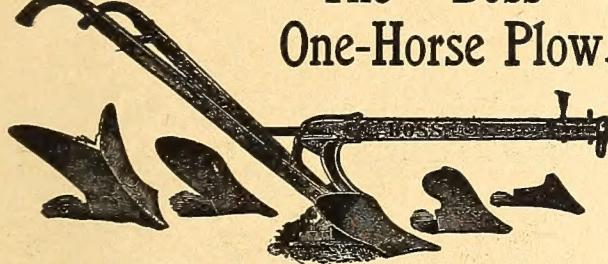
THE "HENDERSON PERFECT" STEEL PLOW is made of genuine finely tempered steel, both mouldboard, shinpiece and landside; the beam is also of steel and will not bend nor break. The entire design of the plow is similar to the celebrated Scotch Plows the mould being perfection in shape, turning the furrow clear over, and grass, weeds and manure entirely under; it scours like glass in all soils, and works beautifully either in light loam without body, or in heavy muck; it runs 25 per cent. easier than ordinary plows, being lighter for both man and team. It is adjustable in every way—the handles can be raised or lowered or shifted to the side; it can be quickly set to cut deep or shallow, wide or narrow, and runs so steadily that at times it is not necessary to touch the handles. The landside is fitted with an adjustable shoe, the temper in the mould is uniformly perfect—free from soft spots—the cutting edge or "shinpiece" can be taken off and sharpened. We usually supply these plows with a chilled carbonate share unless otherwise ordered. In mellow ground this plow does not require a jointer or coulter; in medium sod ground use a jointer which will turn the furrow well under. The mouldboard of this plow is guaranteed for 5 years—though with ordinary care it will last for many years more.

PRICE OF THE "HENDERSON PERFECT" STEEL PLOW.

	Plain.	With wheel.	With wheel and jointer
Regular Two-Horse Size (Number 25) cuts 5 to 8 inches deep by 10 to 15 inches wide. Chilled Carbonate Share 60¢ each	\$16.00	\$17.00	\$18.75

Knife Coulter supplied in place of jointer if preferred. Rolling Coulter will cost \$3.50 extra. Steel share if wanted will be \$3.00 extra.

The Plow
for
Gardeners
and
Truckers.



The "Boss" One-Horse Plow.

The best One-Horse Turn Plow ever sold. It makes a beautiful furrow, turning everything under—weeds, grass, trash and all. We call attention to the fact that the purchaser actually gets four plows for the price of one, viz.: One complete plow, No. 2½ mouldboard and share, making a large one-horse plow. A No. 1½ mouldboard and share, making a medium-size one-horse plow. A cabbage mouldboard and share, making a complete cabbage plow, and by using the plow without mouldboard, with the small share bolted to standard, makes a superior plow for working among cabbage, strawberries, etc. Price, \$6.50 or with a splendid double mouldboard for furrowing, hillling, etc., \$8.00.

Traceless Farm Harness.

Comfort and Convenience for Man and Team.
No Wiffletrees. No Traces.

A practical, up-to-date and common-sense harness which does away with whiffletrees and traces which cause so much damage and annoyance. It is particularly designed for all kinds of low down work, the plow, cultivator, drag stone boat, hay fork, etc. It is valuable for skidding logs, mining and many other kinds of special work. It is commonly used on wagons, mowing machines, etc., having poles. It is ideal for the fruit grower because you can work up close to trees or other growing crops, making a greater saving in hand labor. This harness brings your team ½ to 2 feet closer to their load, making a lighter draft. You can turn your implements in almost their own length.

The draft is straight from the shoulders of both animals at all times, **same as in the ordinary harness**. Each animal is perfectly independent in its movements and can be either higher or lower, ahead of or behind its mate, and have ample play to spread apart or come together, without disturbing the even draft.

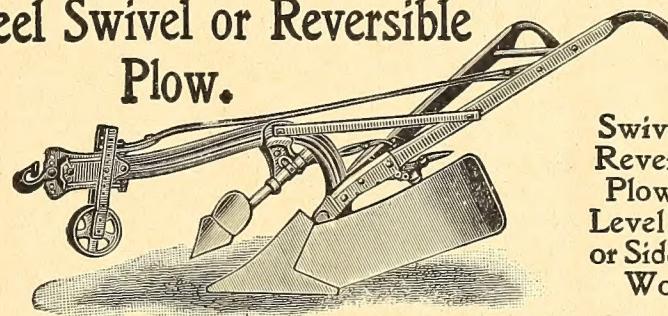
It is simple in construction and more easily put on or taken off than the old style. Each animal is harnessed separately, either in stall or elsewhere.

How Adjusted to the Team. The hames go on the collars as usual. A bow hangs underneath each horse, somewhat farther back than where the belly-band ordinarily hangs. The bows are connected by the short evener between and under the horses. The back pads hold the harness in place when team is not drawing, and are slack at all other times. The back straps keep collars and back pads always in proper position.

No part of the under-gear ever touches the horses, except the broad padded belts. The draft chain runs from the evener, between the team, to the load. The tugs and all other parts are adjustable wherever necessary, to allow for teams of different sizes. Horses can be separated instantly.

We supply the harness in two sizes: Regular size for teams wearing from 17 to 20-inch collars, and an extra large size for those wearing from 20-inch and upwards. Hames are furnished in the low-top style from 17 to 24-inch inclusive. Price, \$27.50 set (draft chain \$1.50 extra). We do not furnish headstalls, collars or reins. In ordering, always give size of hames desired, or of the collars which you use. Weight, complete, crated, 50 lbs.

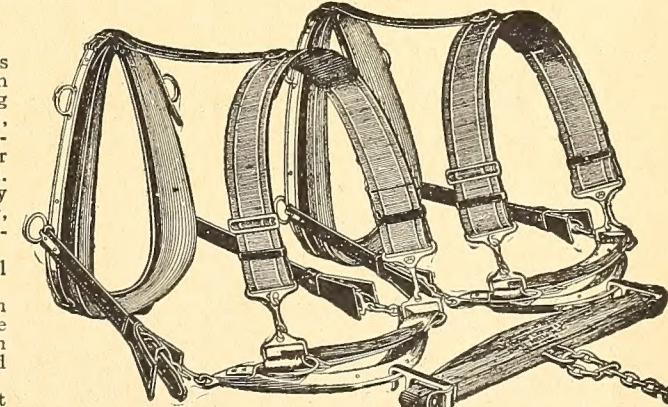
Steel Swivel or Reversible Plow.



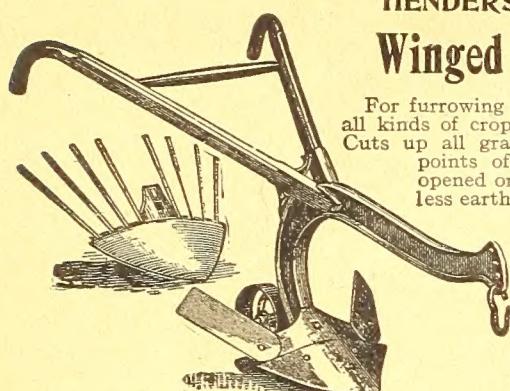
Swivel or
Reversible
Plow for
Level Land
or Side Hill
Work.

This Steel Swivel Plow has a steel beam to give lightness with strength. The finest quality steel mouldboard and adjustable handles. It will do the grandest kind of plowing, whether in level, mellow land or on a rough hillside. It is of light draft and runs very steadily, being an exceptionally easy plow to manage. It has a side-shifting clevis which is operated by the lever extending to the crossbar in the handles, where it rests in notches at the will of the plowman. Clevis can be regulated while team is walking to a narrow or wide furrow. When the mouldboard is thrown under at the end of the row, a lock lever is so arranged that the jointer or coulter shifts and is held securely in position and always in direct line of cut. The mouldboard is thrown over by lifting the handles and pressing a foot latch with the toe. This foot latch is automatic and positive in action, and locks firmly.

Steel two-horse reversible plow, complete as shown. \$20.00



TRACELESS FARM HARNESS.

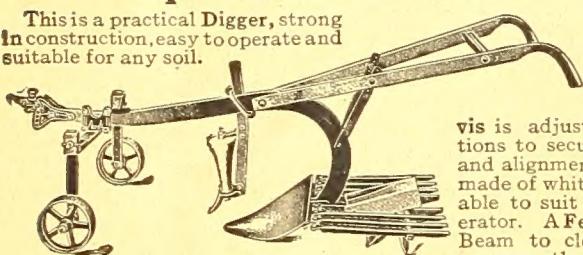


HENDERSON'S IMPROVED Winged Shovel Plow.

For furrowing out, hilling and cultivating all kinds of crops that are planted in rows. Cuts up all grass and weeds. Wings and points of steel. The wings can be opened or closed to throw off more or less earth, and to adapt them to rows of different widths. For weeding, and when it is not desired to throw soil against the plants, the wings should be reversed. The soil then passes over the plow. The depth is regulated by the wheel and draft hook. Handles adjustable in height. Price, \$7.00, or with the Potato Digger Attachment, \$10.75. By the changing of one bolt it may be converted into a first-class potato digger. The fingers are adjustable and removable.

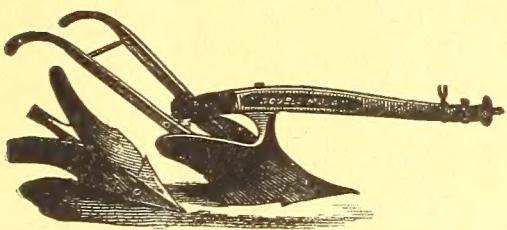
Imperial Shaker Potato Digger.

This is a practical Digger, strong in construction, easy to operate and suitable for any soil.



which is slightly concave. It lifts all the potatoes, leaving none in the ground, and carries them up to the grate in the rear. The Grate or Shaker is given an up and down motion by the five-toothed sprocket wheel which runs on the ground in the rear. This sifts out the dirt, which falls between the bars, while the potatoes pass over and are left clean and whole on the surface of the ground. Two Runners are placed under the forward end of the Shaker. They act as a sled and take up the jar caused by the action of the shaker wheel. The Digger thus runs easily and smoothly. A two-wheeled Foretruck is furnished with the Imperial Digger. It runs astride the row with each wheel on solid ground, and prevents injury to the potatoes. The wheels can be adjusted up and down for depth and sidewise to suit width of row. Price: complete with Foretruck as in cut, \$18.50.

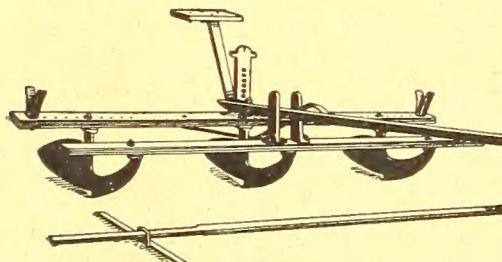
Double Mold Plow FOR RIDGING AND FURROWING.



A one-horse plow used for making drills to plant potatoes, corn, etc.; for ditching, ridging, plowing out between rows; as it throws the earth both ways, doing the duty of two single mold plows. It is also good for digging potatoes.

Prices, No. 1 $\frac{1}{2}$, small size, \$5.00; No. 1 $\frac{1}{2}$, medium, \$6.00; No. 2, full size, \$7.00.

Improved Steel Wing Marker.



FOR POTATO AND CORN GROUND.

The long runners make a very true and even mark, which cannot be thrown out by stiff sod or stones, a difficulty with markers having short teeth. It can be adjusted to width and depth, as desired. The wearing parts of the runners are chilled iron, the wings are steel bolted on and easily replaced when worn. The frame is oak.

Price, for two horses—three runners, gauge, pole and seat

\$13.00

Henderson's Gold Medal Sub-soil Plow

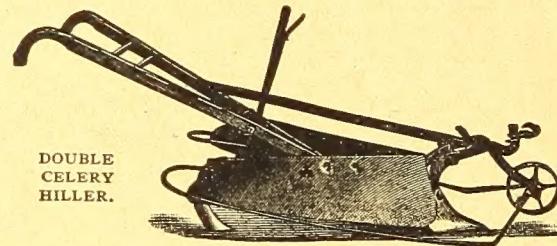
By following the plow with a sub-soil plow the earth can be broken to a depth of from 15 to 20 inches, giving roots a wider range for food, and the plants are hardly affected by excessive drought or a wet season, as the deep soil absorbs all the rain like a sponge and gradually gives off moisture during dry, hot weather.

The "Gold Medal" involves new principles and accomplishes the work without throwing any sub-soil on top. Its merits are ease of penetration, light draft, superior pulverization of hard pan, perfection of the "mole track" effect. The one-horse plow will reach to a depth equal to the height of its standard—15 to 16 inches—and the two horse plow to the depth of 20 inches.

Prices for one-horse, with wheel and draft rod, \$8.25; two-horses, \$10.50.

Extra shares, 1 horse, 55c.; 2 horse, 90c.

Planet, Jr., Celery Hillers.



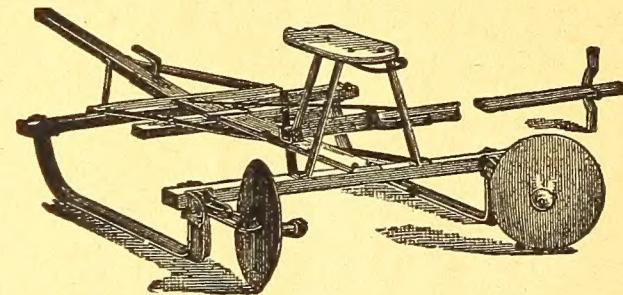
Celery Hillers are now considered indispensable in celery growing. The leaf lifters are adjustable in height, and are especially valuable for first workings. With them some large growers hill their celery without any handling. We can supply both single and double hillers, with lever

expanders and leaf lifters. The Double Celery Hiller is fitted with lever wheel. The hilling blades are 43 inches long, adjustable in width or height as wanted; the double machine works all rows up to four feet apart. Before hillling, the soil should be thoroughly loosened with a horse hoe.

The Single Celery Hiller runs lighter than the double, and throws rather higher; it works any width rows. Where market gardeners plant close, and first bleach every other row, it is "just the thing." It is also excellent help when burying the crop.

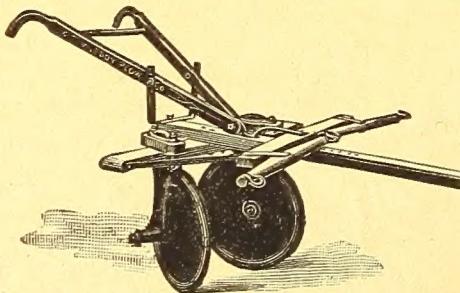
Prices, Double Celery Hiller, complete..... \$20.00
Single " " " " " 16.00

Darnell's Marker, Furrower and Coverer.



Invaluable for marking out, furrowing, covering or ridging all kinds of row crops, in any kind of soil; the revolving discs, 14 inches in diameter, make a clean cut, are not choked by manure, trash or clods, and leave the earth in a pulverized

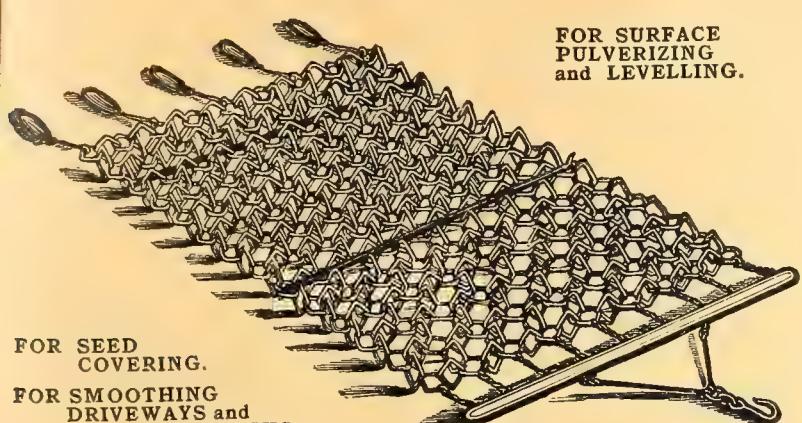
condition at the bottom of the furrow. It is adjustable in every way, depth of furrows, distance apart, broad or narrow furrows, etc. It opens two furrows at once, or it will make one double furrow or ridge up both sides of a row at one operation; it covers evenly at any depth, it runs steadily, will not slide on a side hill, and is strong, light, durable and invaluable to every farmer and truck gardener. Price, \$22.00.



Eddy Potato Coverer and Hiller.

Adapted for covering and hillling all rowed crops as fast as a team can walk. It will not only cover the seed, but hill up both sides of the row at one operation, throwing up much or little earth as desired, according to the angles at which the disks are set. The disks are adjustable on the frame for a wide or narrow row. Price, \$13.25. Whiffletrees are not included. Complete with whiffletrees and neck yoke, \$16.75.

Imported Scotch Chain Harrow.

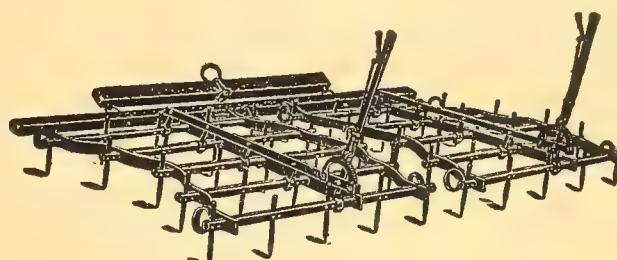
FOR SURFACE
PULVERIZING
and LEVELLING.FOR SEED
COVERING.FOR SMOOTHING
DRIVEWAYS and
RACE TRACKS.

The Scotch Chain Harrow is being so much sought after for the undermentioned purposes that we have imported and carry in stock a few of each size to prevent delay in filling hurry orders. It is one of the best implements for pulverizing the surface of the soil, levelling and smoothing, and is also splendid for covering grass seeds, etc., being superior to the Brush Harrow for this purpose. Used on driveways and race tracks, it smooths the surface, eliminating ruts and footprints. It is made of wrought-iron links, as illustrated above, and is very durable.

SIZES AND PRICES.

One-horse size, 5 x 6 feet.....	\$22.00
Medium two-horse, 6 x 7½ feet.....	32.00
Full two-horse size, 7½ x 7½ feet.....	38.00
Whiffletrees, extra.....	3.50

The Henderson Lever-Set All-Steel Harrow.

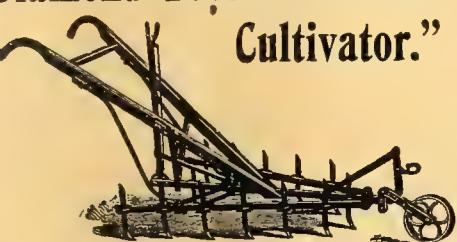
A SPIKE-TOOTH HARROW WITH LEVER UP.
A SMOOTHING HARROW WITH LEVER DOWN.

A high-class Harrow in every respect, being made entirely of finest steel, excepting the draw-bars. With a wrench the tooth-bars can be loosened so that any one or all of the teeth can be lowered—to compensate for wear. It has a wide range of adjustment. The teeth can be instantly set at any angle from a forward pitch to straight up and down or slanting backward, the lever-catch holding them securely in the desired position. This Harrow is not made to sell "cheap" but is of full weight and strength, with $\frac{1}{8}$ inch teeth. It is handsomely finished, simple, strong and does grand work.

SIZES AND PRICES.

No. A. 1 Horse, 1 Section, 25 Teeth, 4 ft. cut.....	\$9.00
" B. 1 " 1 " 30 " 5 "	10.00
" C. 2 " 2 Sections 50 " 8 "	17.00
" D. 2 " 2 " 60 " 10 "	19.00

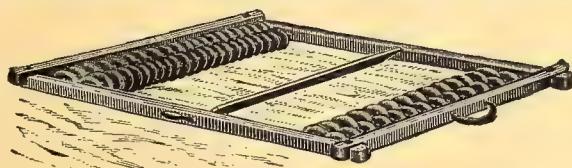
Diamond Tooth "Harrow Cultivator."



A splendid tool for cultivating garden and field crops in rows. The numerous diamond-shaped steel reversible teeth thoroughly pulverize and loosen the soil. The frame expands or contracts by operating the lever between the handles. The back, wide, flat steel hoe sweep cuts off all weeds. Can be used or not as the work requires.

Price, with wheel, \$6.90; Sweep, extra
\$1.00.

The Meeker Disc-Smoothing Harrow.



It is a splendid substitute for a rake for garden purposes, or for seeding down. It pulverizes and grades, leaving the ground in as fine a condition as could possibly be done by hand. No market gardener or farmer can afford to be without it.

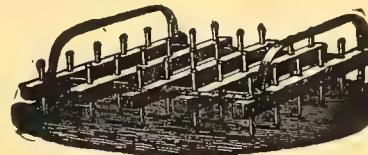
The board in the center is set at an angle; is adjusted up and down, and acts as a leveller.

The discs grind all lumps so fine that seed must come up, and mashes small stones below the surface better than any field roller; it levels the ground at the same time, which a field roller does not do.

PRICES.

Market garden, size 6½ feet.....	\$25.00
Track " 8½ "	30.00

Evan's Gardener's Harrow



It is designed for one horse, convenient to handle and get around garden plots, etc. Beams of oak, teeth of steel. For transportation to and from the field invert the harrow on the runners, which saves lifting and loading.

PRICE.

30 teeth.....	\$8.00
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The "Acme" Pulverizing Harrow.

A general-purpose harrow, that will crush, cut, lift, turn, smooth and level the soil to perfection, all in one operation. While preeminently adapted for heavy, stubborn land, it can be adjusted by means of the levers and runners to do perfect work on the lightest soil. It cuts the entire surface without disturbing sod or trash that has been turned under by the plow. It prepares a perfect seed bed, and also covers seed in the best manner. The draft is reduced to a minimum. Being made entirely of cast steel and wrought iron, it is practically indestructible. Nothing but the coulters can possibly wear, and these are readily replaced at a trifling cost.

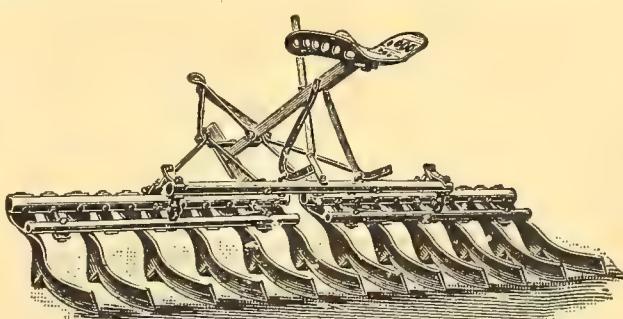
PRICES AND SIZES.

No. 23. New Flexible Gang Two-horse Riding Harrow. Cuts 6½ feet.....	\$24.00
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"ACME" ONE-HORSE HARROW.

No. H. Works 4½ feet wide. 8 coulters. With seat and lever adjusted.....	\$18.00
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No. G. A splendid one-horse cultivator. 6 coulters. Cuts 3 feet wide. Has handles, as shown in cut, but no seat or lever. Price.....	\$12.00
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ACME HARROW NO. 23.

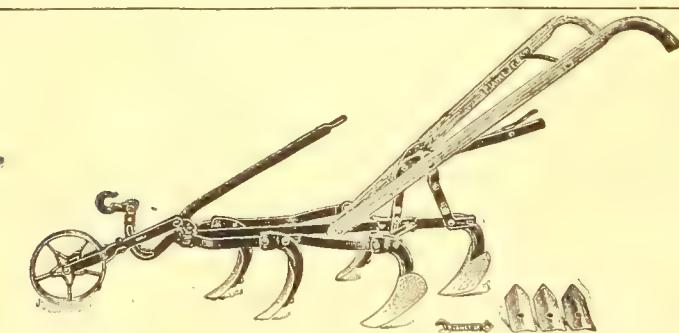
“Planet, Jr.” All Steel Horse Hoe and Cultivator, No. 8.

This grand implement is without a peer as a labor saver, and no progressive gardener or farmer after once trying it would be without it for ten times its cost. It is no ordinary heavy, clumsy cultivator, but an implement made scientifically correct and *entirely of steel*. The patent frame is extra long and two inches higher than other cultivators, the standards being hollow, giving great strength and remarkably light weight; in consequence it is easy for both men and horse to work. The cultivator, teeth, hoes etc., are of the finest possible quality of case hardened, polished steel that will retain an edge; they always scour bright, and will not clog in the stickiest soil; besides, they are so correctly shaped and curved that the operator can work closer up to plants without danger than with any other horse implement made, thereby entirely doing away with the usual finishing up with a hand hoe. As set in the illustration, the two forward cultivator teeth loosen the soil to any desired depth; the hoes follow cutting off weeds below the surface and throw much or little dirt to the rows as desired, this being quickly arranged by setting the hoes at the desired angle from the plant to the center of the row, as the hoe standards are on an adjustable swivel. Hoeing away from small plants is done by swiveling the hoe standards entirely around. Plain cultivating is done by replacing the three back hoes with cultivator teeth. Furrowing is done with the two hoes or with the back plow steel placed in front of the two hoes. The Lever Expander enables the operator instantly to open or shut the implement and lock it to suit any width or row, and can be worked while the implement is in motion, so that perfect work can be done even in irregular rows. The Level Wheel enables the machine to be instantly raised or lowered and locked at any desired height, while the implement is in motion, and is very convenient for changing the depth in variable soils and for raising the teeth out for turning at the end of the rows. The Depth Regulator is worked and set simultaneously with the wheel by the lever-bar; by this arrangement the implement runs steadily and the depth can be gauged instantly and to a nicety while the horse is in motion. The Handles can be quickly set to either side, and the height can be changed to suit the operator. Weight 82 lbs. Price, Planet Jr. No. 8, with solid steel wheel (as shown in cut), \$11.50.



PRICE.

Planet, Jr., No. 8, Horse Hoe and Cultivator with solid steel wheel (as shown in the cut) \$11.50.



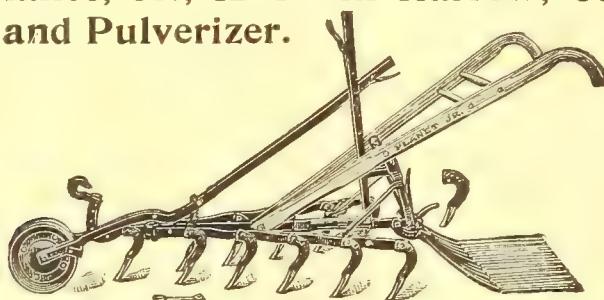
The Planet, Jr., No. 104 Horse Hoe and Cultivator.

This new implement for 1916 is made to meet the demand for a cheaper tool than the No. 8. This is a little lighter in all parts, but strong and efficient, and is particularly adapted for sandy and light soils. It performs the same range of work as the No. 8, viz: cultivates, hoes, furrows, hills up, etc. Complete it is furnished with lever expander, lever wheel, five 3-inch cultivator steels, one pair 6-inch horse hoe steels and one 7-inch double shovel steel for rear. Weight, 62 lbs.

Price, No. 104, horse hoe and cultivator, complete as just described, \$8.75 or with plain wheel, \$8.25 or without wheel, \$7.25.

Price, as cultivator only (No. 101) with lever expander, plain wheel and five 3-inch cultivator steels, \$7.00 or without wheel, \$6.00.

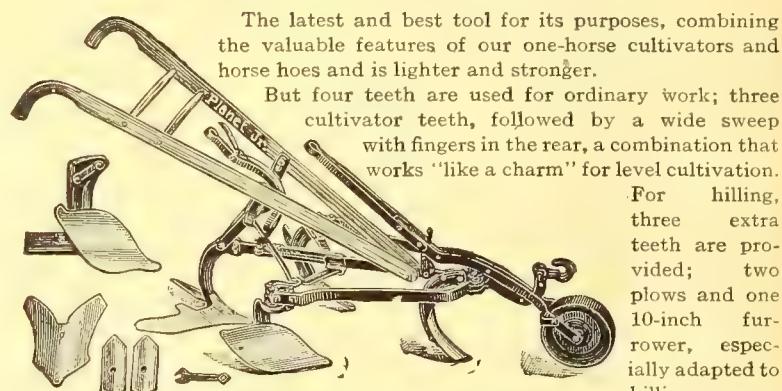
The Planet, Jr., 12-Tooth Harrow, Cultivator and Pulverizer.



This thorough working tool has rapidly grown in favor among strawberry growers, market gardeners and farmers. The twelve chisel-shape teeth do capital work, without throwing earth on small plants, and the tool is so convenient, durable and strong, the combination of teeth and pulverizer leaving the ground in the finest condition. The pulverizer also enables the operator to set the tool, in conjunction with the wheel, to any exact depth desired, making delicate work not only possible, but very easy. It is invaluable in narrow rows and close work, and is fine for preparing seed beds. The implement is fitted with lever wheel and lever expander, so the depth or width can be changed instantly while in operation; it contracts to 12 inches and expands to 32 inches. The handles can be raised or lowered to suit the driver.

Price, plain, \$7.75; with wheel, \$9.50; complete, \$11.50

Planet, Jr., No. 10 Horse Hoe, Cultivator, Hiller and Vine Turner.



The latest and best tool for its purposes, combining the valuable features of our one-horse cultivators and horse hoes and is lighter and stronger.

But four teeth are used for ordinary work; three cultivator teeth, followed by a wide sweep with fingers in the rear, a combination that works "like a charm" for level cultivation.

For hillings, three extra teeth are provided; two plows and one 10-inch furrower, especially adapted to hillings crops.

not over 3½ feet apart. As a furrower it works admirably. The Vine Turners, a new pattern, are of special value in cultivation of all vine crops.

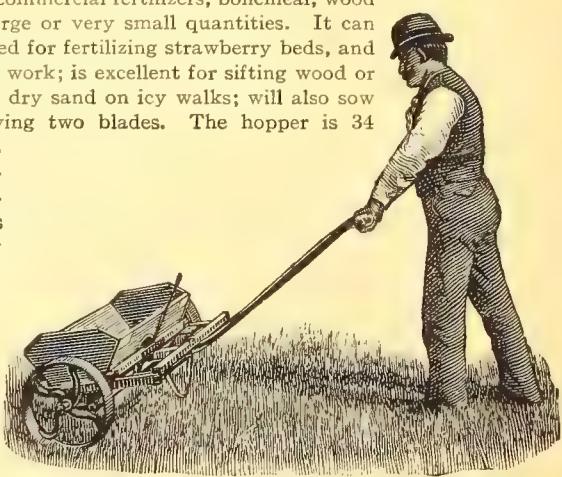
Price, complete, as in cut, \$15.00. Without Vine Turner, \$13.50.

Stevens Hand Power Fertilizer Sower.

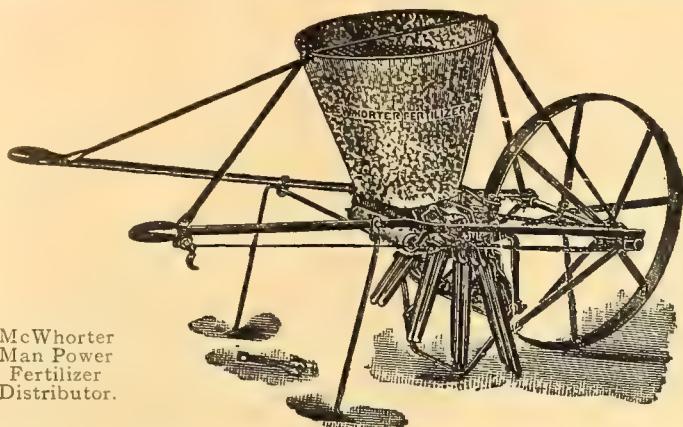
For Top-Dressing Lawns, Tennis Courts, Golf Greens, etc.

It sows all kinds of commercial fertilizers, bonemeal, wood ashes, lime, etc., in large or very small quantities. It can also be successfully used for fertilizing strawberry beds, and other garden and field work; is excellent for sifting wood or coal ashes, sawdust or dry sand on icy walks; will also sow damp sand by removing two blades. The hopper is 34 inches long and holds one and one-half bushels. Weight of machine, 83 lbs. It is well made and nicely painted. Price, \$13.00.

For the
McWhorter
Horse Power
Fertilizer
Distributors
see page 8.



McWhorter Man Power Fertilizer Distributor.



McWhorter
Man Power
Fertilizer
Distributor.

Any commercial fertilizer can be applied with it in any desired quantity from 3 pounds to 40 pounds per 100 yards of row. It will distribute broadcast or in furrows or between rows, or both sides of one, two, three or four rows, according to their distance apart, at one operation. The fertilizer is forced through eight distributing spouts, which may be contracted to cover a 4-inch strip; or they may be spread into any position not exceeding 2½ feet in width. For top dressing strawberry beds, lawns, etc., as well as for rowed crops, it is a boon. Easily worked by man or boy. Weight 61 lbs. Price, \$13.00.

**THE HENDERSON
Hand Corn Planter.**

The only Planter containing an adjustable dropping disc.

The disc is quickly adjusted for a light or heavy seeding, and rotates similar to the disc in a Horse planter.

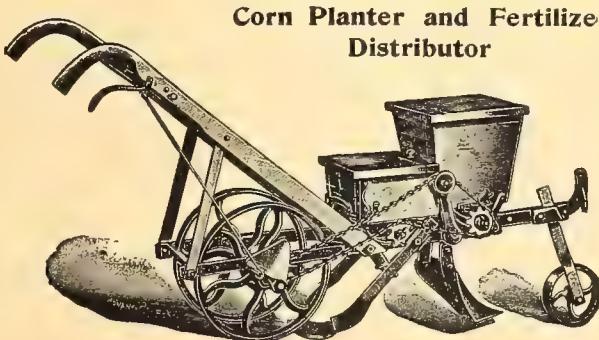
The Planter is easily operated by a boy or girl.

Works in all kinds and conditions of soil, and is the only one which insures an accurate and reliable seeding.

Price, \$2.00.
P.P., 8 lb.



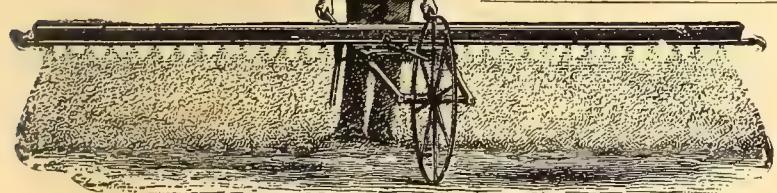
The "Keystone"
Corn Planter and Fertilizer
Distributor



THE BEST CORN PLANTER AND FERTILIZER DISTRIBUTOR IN THE WORLD.

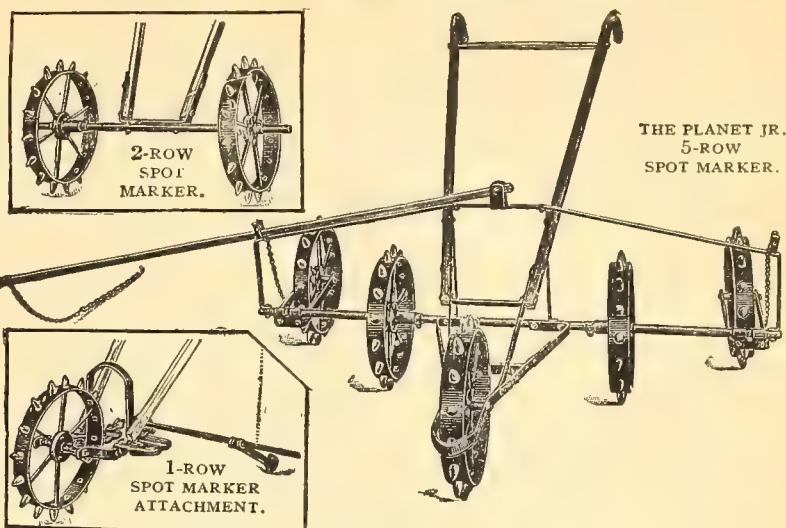
It cracks no grains and will plant from ten to twelve acres of corn per day, dropping kernels in drills or in hills at any desired distance apart and sowing at the same time, if needed, any kind of pulverized fertilizer; it is simple enough for the most ordinary laborer to use without getting it out of order. Each machine is furnished with four dropping rings and pinions to regulate the number of kernels and distance apart of planting. In addition to these four rings, we furnish rings at 35c. P. P. 2 lbs. apiece extra to plant peas, beans and other seeds, which, by the arrangement of the holes in the rings and the different pinions we furnish, can be distributed in any way that a farmer could wish. Some use it entirely for planting ensilage, others for planting peas, beans, etc. The phosphate attachment is perfect. The phosphate is accurately distributed and with absolute safety from injury to the seed; at the same time it may be placed near enough so that the young plants may at once receive the intended nourishment to give them an early start.

Prices of "The Keystone" Corn Planter, with
Phosphate Attachment. \$18.00.



The Henderson DOUBLE HOPPER Wheelbarrow Seeder.
SOWS GRASS SEED MIXTURES
AS WELL AS HEAVY SEEDS OR LIGHT CHAFFY SEEDS.

This is a superior Seeder. One side of the Seed Box is adapted for all such heavy seeds as clover, timothy, millet, alfalfa, Hungarian, etc. The opposite side handles the light chaffy seeds, as Red top, Kentucky blue, Orchard grass, etc., as well as grass seed mixtures for golf, pasture, hay, lawns, etc. The machine may be easily regulated to sow any desired quantity per acre, sowing it accurately and evenly the whole length of the hopper—14 feet—and it does not clog up. The total weight of the machine is only 40 pounds. The hopper is perfectly balanced and is close to the large wheel—giving greatest force with least exertion, and leaving light weight on the operator. Every machine warranted to do good work, and of especial value on a windy day. Full directions with each seeder. Price, \$12.00.



**The Planet, Jr.,
Spot and Row Markers.**

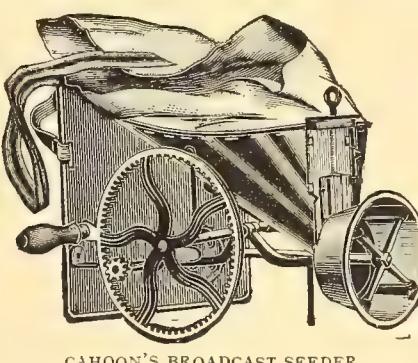
These new implements fill a long felt need for marking out rows and "spotting" them for planting out such crops as onion, beets, leeks, celery, cabbage lettuce, strawberries, etc. The steel wheels are 13 inches in diameter with 2-inch face to which are bolted 16 steel pointed plugs 1½ inches long, these are removable so the "spots" are marked 3, 6, 12, 15, 24 or 48 inches apart as required. The wheels may also be spaced to mark out rows different distances apart, for instance with the 5 row machine which is 60 inches wide may be set to mark out 5 rows any width from 8 to 12 inches apart or 4 rows 14 to 16 inches apart or 3 rows 12 to 24 inches or two rows 25 to 48 inches apart, etc. The two row spot marker is especially adapted for marking out two rows any distance from 12 to 30 in. apart.

Prices, 5 row spot marker \$13.00; 3 row spot marker \$12.00; 2 row spot marker \$8.00; 1 row spot marking attachment (wheel and marker) for any Planet Jr. wheel hoe having arch \$2.75, wheel only, \$1.50.

The "Velvetlawn" Seeder.

For seeding new lawns and renovating worn out lawns and bad spots without digging. Puts the seed IN old sod or IN newly prepared ground, covers and rolls it.

See description on page 35.



CAHOON'S BROADCAST SEEDER.



**Cahoon's
Improved Broadcast Seed Sower.**

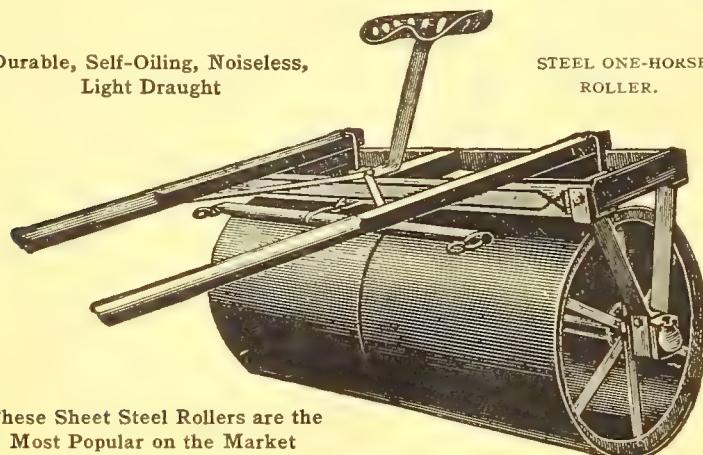
Will sow all kinds of grass and grain seeds from 4 to 8 acres per hour at a common walking gait. Heavy seeds, such as wheat, it will throw 40 ft. (20 ft. each side of the operator); lighter seeds, of course, will not be thrown so far. Price, \$3.75 P. P. 8 lb.

Steel One-Horse Lawn Rollers.

Especially designed to smooth and keep in perfection
LAWNS, DRIVES, WALKS AND GROUNDS OF GOLF, TENNIS, ATHLETIC
AND COUNTRY CLUBS AND GENTLEMEN'S PLACES
No. 2, 24 in. diam.; tracks 5 ft., 5 in.; 2 sections; weight 409 lbs. Price, \$33.00.

Durable, Self-Oiling, Noiseless,
Light Draught

STEEL ONE-HORSE
ROLLER.



These Sheet Steel Rollers are the
Most Popular on the Market

Unbreakable rolled sheet steel drums, with steel felloes and channel steel spokes; thoroughly riveted and practically indestructible; axle of heavy stiff steel with lathe turned ends, working in oil soaked maple boxes which are recessed below and filled with cotton waste, which when soaked with oil will lubricate the journals the whole season, resulting in the lightest draught, smoothest and most noiseless working Roller on the market. The frames and hangers of heavy stiff angle iron are securely bolted and the frame so arranged that additional weight may be added to suit requirements.

Steel Two-Horse Rollers.

(For details of construction see above.)

No. 16, 24 in. diam.; tracks 7 ft. 3 sections; weight 519 lbs. Price, \$34.00
No. 34, 30 " " " 8 " 3 " " 728 lbs. Price, \$42.00

Prices include double trees and neck yoke.

McWhorter Horse Power Fertilizer Distributors.

These improved machines are very highly appreciated by farmers where known, and are extensively used in the large market gardening sections, where they are considered indispensable. With one of these machines commercial fertilizer of any kind may be distributed in any desired quantity in open furrows, or placed as side dressing on both sides of a row of growing plants doing two to six furrows or rows at one time according to the distance between the rows and the size of the machine. The machines are very simple and easily understood, the fertilizer is forced through adjustable distributing spouts, which can be quickly spread to suit the width of row or size of plants; or the spouts may be instantly set as a complete and uniform broadcaster for strawberry beds, farm crops, lawns, etc.

No. 34 McWhorter Fertilizer Distributer.

Our New "Low Down" for one horse. The four feeds and movable rubber spouts make it a complete broadcaster to the extent of six and one half feet. It will fertilize three furrows if not over two feet nine inches apart, and will distribute in two furrows from that up to five feet six inches, the spouts being adjustable to suit the different kinds of work. It will side dress on both sides of two rows of growing crops. It will also side dress one side of two or three rows.

Shipping and net weight, 260 lbs. Hopper capacity about 375 lbs. Price, \$41.00.

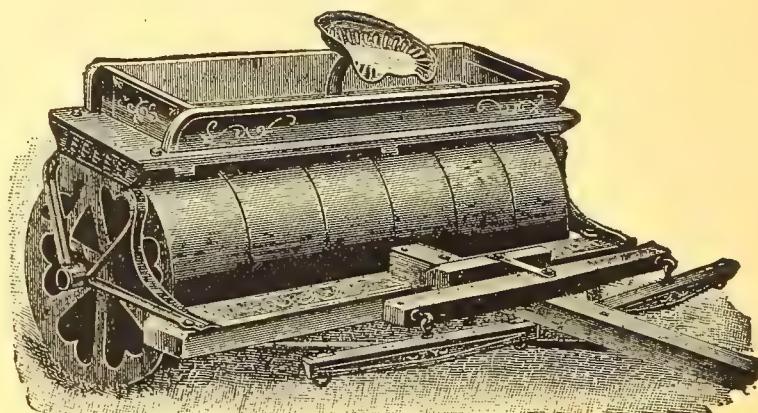
No. 26 McWhorter Fertilizer Distributor.

Our New "Low Down" two horse Fertilizer Distributer, broadcasting a width of nine feet. Being low down and the wheels entirely out of the way make it especially well adapted to fertilizing orchards and groves of all kinds. By means of the adjustable spouts it will also fertilize any number of furrows or rows that come under the width of the machine.

Shipping and net weight 373 lbs. Hopper capacity about 540 lbs. Price, \$57.00.

Henderson's Superior Iron Rollers.

For use on Lawn, Field, Golf Course, Roads, Etc.



These rollers are of superior quality and finish, having smooth machine turned faces, and attractively decorated woodwork. They are the lightest draft rollers of equal weight on the market, being perfectly balanced and pulling directly from the axle. The weights given are actual, which fact should be taken into consideration in comparing prices with rollers of other manufacturers that run 15 to 25 per cent. less than advertised weights.

Iron One-Horse Rollers. Complete with Weight Box, Shaft and Seat.
(If scraper is wanted, add \$6.00 per roller.)

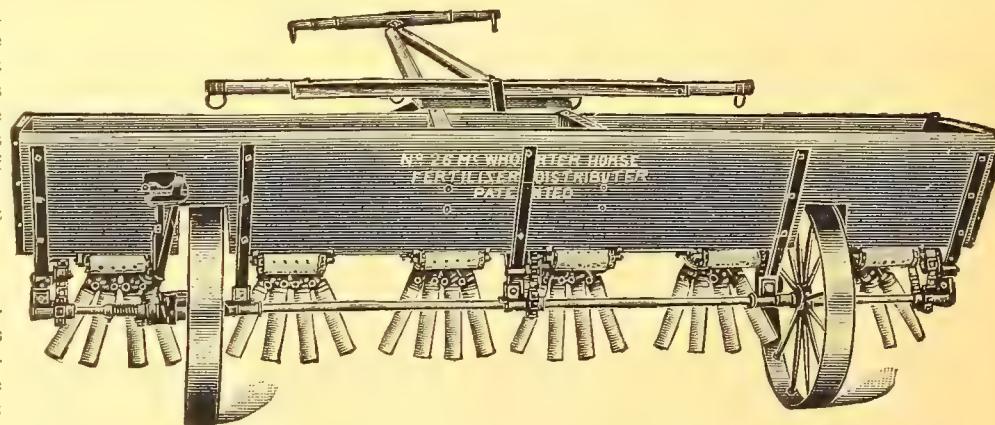
Number.	Diameter.	Sections.	Track.	Weight.	Net Price.
60	20 inches	4	4 feet	950 lbs.	\$55.00
61	20 "	5	5 "	1150 "	64.00
62	24 "	4	4 "	1200 "	68.00
63	24 "	5	5 "	1450 "	80.00
64	24 "	6	6 "	1700 "	92.00
65	28 "	4	4 "	1350 "	76.50
66	28 "	5	5 "	1650 "	90.00
67	28 "	6	6 "	1950 "	105.00
68	32 "	4	4 "	2200 "	122.00
69	32 "	5	5 "	2600 "	142.00

Iron Two-Horse Rollers.

Prices include weight box seat and tongue. If whiffletrees and neck yoke are wanted, add \$4.00 per roller; if scraper is wanted, add \$6.00 per roller.

Number.	Diameter.	Sections.	Track.	Weight.	Price.
70	20 inches	5	5 feet	1150 lbs.	\$64.00
71	20 "	6	6 "	1300 "	70.00
72	24 "	5	5 "	1450 "	80.00
73	24 "	6	6 "	1700 "	92.00
74	28 "	4	4 "	1350 "	76.50
75	28 "	5	5 "	1650 "	90.00
76	28 "	6	6 "	1950 "	105.00
77	32 "	4	4 "	2200 "	122.00
78	32 "	5	5 "	2600 "	142.00
79	32 "	6	6 "	3000 "	162.00

For Hand Power Rollers see page 36.

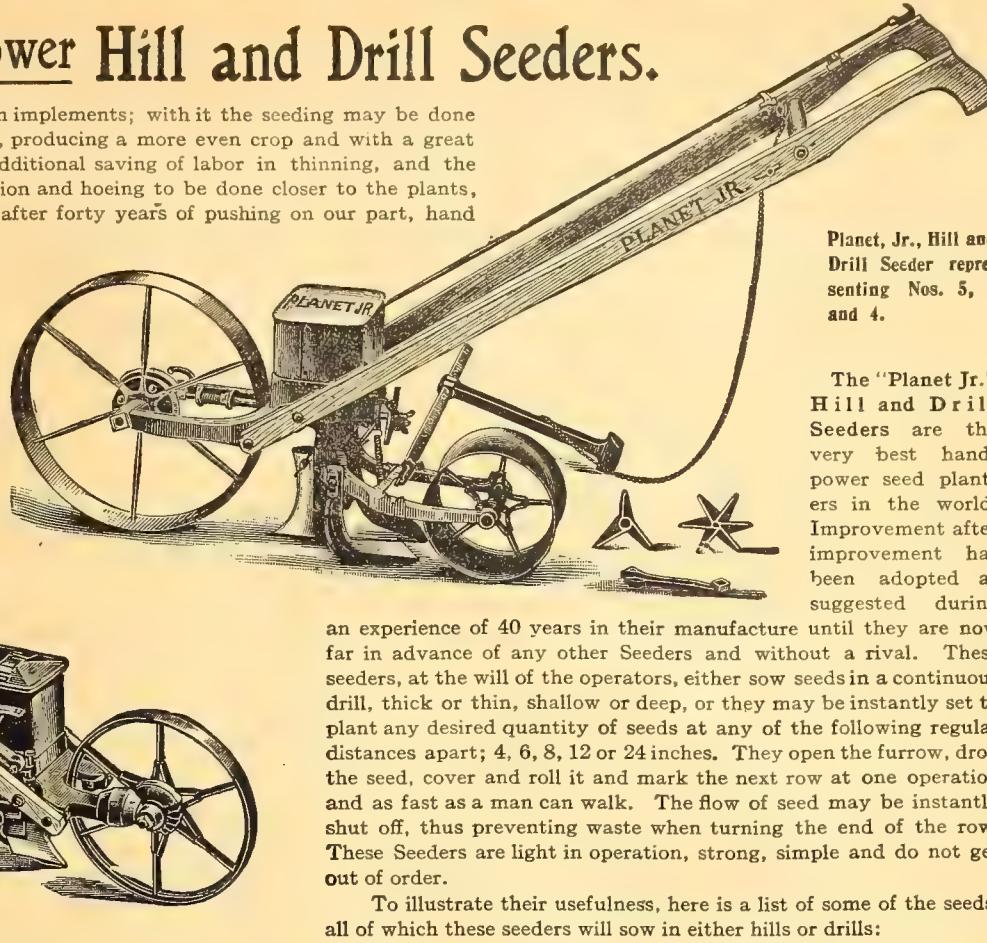


MC WHORTER FERTILIZER DISTRIBUTER—NO. 26 FOR TWO HORSES.
Set for Broadcasting nine feet wide.

The "Planet, Jr." Hand Power Hill and Drill Seeders.

A good Seeder is one of the most important of garden and farm implements; with it the seeding may be done in one-fourth of the time required by hand and be done far better, producing a more even crop and with a great saving of seed; with the "hill droppers" there is also a great additional saving of labor in thinning, and the seed being sown in an even narrow line enables wheel hoe cultivation and hoeing to be done closer to the plants, thus reducing hand labor to a minimum. We believe that even after forty years of pushing on our part, hand seeders and wheel hoes are not yet appreciated as they should be; are not used by one-half the people that would find them to pay for themselves in a short time.

No. 25, Planet, Jr., Hill and Drill Seeder combined with Double Wheel Hoe.



Planet, Jr., Hill and Drill Seeder representing Nos. 5, 3 and 4.

The "Planet Jr." Hill and Drill Seeders are the very best hand-power seed planters in the world. Improvement after improvement has been adopted as suggested during

an experience of 40 years in their manufacture until they are now far in advance of any other Seeders and without a rival. These seeders, at the will of the operators, either sow seeds in a continuous drill, thick or thin, shallow or deep, or they may be instantly set to plant any desired quantity of seeds at any of the following regular distances apart; 4, 6, 8, 12 or 24 inches. They open the furrow, drop the seed, cover and roll it and mark the next row at one operation and as fast as a man can walk. The flow of seed may be instantly shut off, thus preventing waste when turning the end of the row. These Seeders are light in operation, strong, simple and do not get out of order.

To illustrate their usefulness, here is a list of some of the seeds, all of which these seeders will sow in either hills or drills:

Asparagus,	Cucumber,	Onions for Bulbs,	Ruta Baga,
Bean,	Endive,	Onion for Sets,	Sage,
Beet,	Flower Seeds,	Parsley,	Salsify,
Cabbage,	Kale,	Parsnip,	Spinach,
Carrot,	Leek,	Peas,	Tobacco,
Cauliflower,	Lettuce,	Pepper,	Tomato,
Celery,	Melon,	Radish,	Turnip,
Chicory,	Okra,	Rice,	Etc.

THE COMBINED MACHINES. These are very useful and popular. Combining, as they do, in a single implement both the seeding and the hoeing, cultivating and other attachments. The Seeder removes entirely from the frame by loosening only one nut, when the hoeing attachments, etc., are to be used, and vice versa. See illustrations.

Prices, "Planet Jr." Hill and Drill Seeders.

	Wheel	Capacity	Price
No. 5 Hill and Drill Seeder. A special large size for market gardeners and farmers, sugar beet growers, etc.....	16½ in.	5 qts.	\$15.50
No. 3 Hill and Drill Seeder. The popular size for market gardens and large private and hotel gardens.....	15 in.	3 qts.	12.50
No. 4 Hill and Drill Seeder. The favorite size for family gardens and small market gardens.....	11 in.	2½ qts.	10.75
No. 4 Combined Seeder, with a Single Wheel Hoe Outfit. Seeder removes for hoeing, etc.....	11 in.	2½ qts.	13.25
No. 25 Combined Seeder, with a double Wheel Hoe Outfit, (as illustrated). The seeder removes for hoeing, etc....	11 in.	2½ qts.	16.00
No. 6 Hill and Drill Seeder, as a seeder only.....	16½ in.		14.00
No. 6 Seeder Combined with a Single Wheel Hoe Outfit, (as illustrated).....			17.00

No. 6 Planet, Jr. Hill and Drill Seeder, combined with Single Wheel Hoe Outfit.

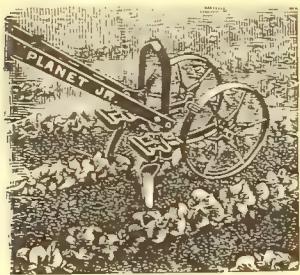
The Planet, Jr., No. 31 Combined Seeder, Wheel Hoe, Cultivator, Etc.

A SPECIAL LOW PRICED MACHINE FOR SMALL GARDENS.

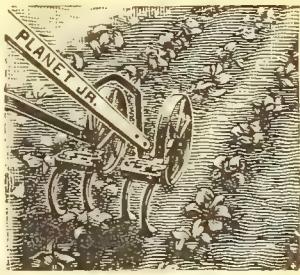
Those who do their own gardening in a small way in town or suburbs and have not felt justified in purchasing the higher priced implements may now enjoy the pleasure and profit of working their gardens with a thoroughly practical up-to-date Planet Jr. of moderate cost, with the new No. 31 all garden seeds from the smallest even to peas and beans may be sown in rows as rapidly as you can walk. It opens the drill $\frac{1}{4}$ to 2 inches in depth sows the seed even to a packet any thickness desired and covers it all at one operation. The index for different seeds is quickly and easily set. The seed hopper holds one quart. The Seeder may be removed in a moment for the hoeing and cultivating attachments to be used. These consist of one large garden plow for furrowing out, hillng up, etc. Two flat hoes or "Sweeps" one 5 inches and one 10 one 5-tooth prong hoe for deep or shallow mulching, etc., and one two-inch cultivator. The whole combination is just what is needed doing the various operations for which it is ease. May be used by Complete (No. 31) as

The Planet, Jr., No. 31 Combined Seeder, Wheel Hoe, Etc.

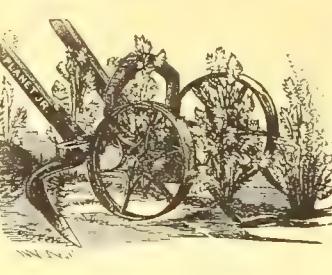
Price above described, \$8.50.
Price as a seed drill only (No. 32) \$6.00, or as a wheel hoe only (No. 33), \$3.75



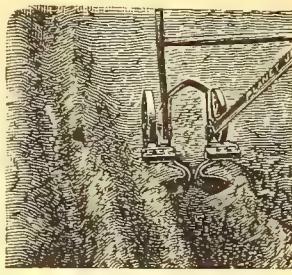
HOEING



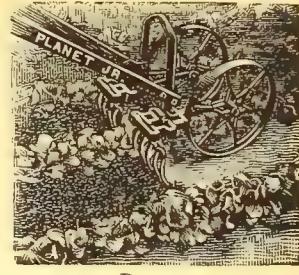
CULTIVATING



EARTHING UP



FURROWING



RAKING

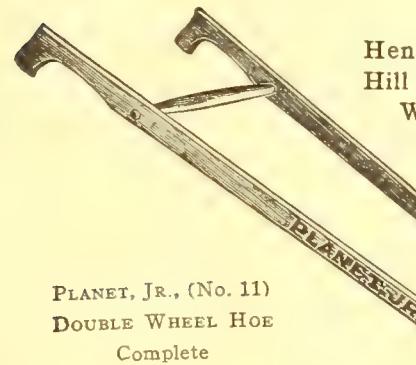
The New "Planet, Jr." Wheel Hoes and Cultivators.

FOR HAND POWER.

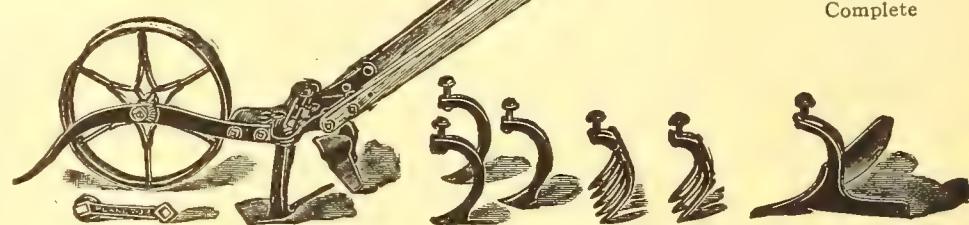
Wheel Hoes with their attachments for cultivating, hillling, furrowing, covering, etc., are among the great labor-savers of the age. They not only make the care of all rowed crops a pleasure, but enable a man to care for five times the area that can be done by "the man with the (other) hoe." They are built substantially for all-day work by an able-bodied man, yet they are adapted to the strength of a boy or woman.

THE DOUBLE WHEEL HOES, while they work equally well between two rows of plants, are especially adapted for straddling one row, working close up to both sides of the plants, until they are twenty inches high.

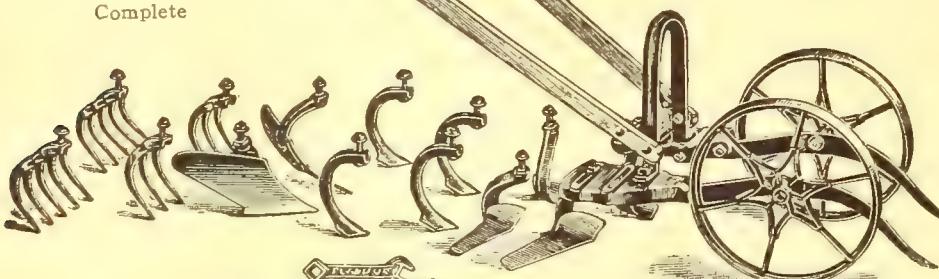
THE SINGLE WHEEL HOES, are rather lighter than the double, and while the wheel can be set on the side of the frame, enabling both sides of one row to be hoed at one time, yet they are best adapted for working between two rows of plants.



Henderson's Special
Hill and Drill Seeder
Wheel Hoe, Culti-
vator, etc., is
offered on
page 53.



PLANET, JR., (No. 16)
SINGLE WHEEL HOE
Complete



The New "Planet, Jr." Wheel Hoes, Etc. THEIR ATTACHMENTS AND USES.

The Cultivator Teeth, a fine model of best stamped steel used for either deep or shallow stirring and cultivation.

The Flat Hoes, for surface hoeing, cutting off weeds, etc. The 4½-inch are for rows under 12 inches wide; the 6-inch for wider rows. The hoes can be exchanged to either side, thus throwing a little earth to or from the plants, as desired.

The Small Plows, (supplied with the Double Wheel Hoes) are valuable for hillling up, covering, furrowing, etc.

The Large Landside or Turn Plow, (supplied with the Single Wheel Hoes) is used for plowing, furrowing, hillling, covering, etc.

They will throw either to or from the plants as set.

The Rakes are for stirring, fining and leveling the surface and for early cultivation.

The Leaf Lifters turn aside the foliage without injury when plants are large, so that close work can be done rapidly and easily.



The only difference between the various Double Wheel Hoes and the various Single Wheel Hoes is in the equipment as herewith detailed.

No. 11, Double Wheel Hoe, equipped as illus. 2 2 4 2 0 2 2 2 \$11.00
" 12, " " " equipment 2 0 4 2 0 0 0 0 8.75
" 13, " " " equipment 2 0 0 0 0 0 0 0 6.00
" 16, Single Wheel Hoe, equipped as illus. 2 0 3 0 1 1 1 1 7.25
" 17, " " " equipment 2 0 3 0 1 0 0 0 6.25
" 17½, " " " equipment 2 0 3 0 0 0 0 0 5.50
" 18, " " " equipment 2 0 0 0 0 0 0 0 4.50

Extra equipment may be added at any time at price mentioned, per each

45c. 40c. 35c. 55c. \$1.10 45c. 35c. 20c.

Parcel Post Weight per each

17oz. 17 oz. 13 oz. 17 oz. 45oz. 15 oz. 10 oz. 8 oz.

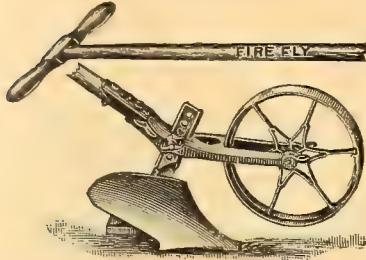
The "Henderson" Hand Garden Plow, Furrower, Hiller and Scuffle Hoe.

This is one of the handiest garden tools ever used, very light (weighs only 20 pounds), but strongly made and finely finished; adjustable frame. It is equipped with a plow, suitable for opening and covering furrows, hillling celery, potatoes, etc., and for plowing under the accumulations in a poultry yard it is very useful. The Scuffle Hoe cuts off weeds below the surface and loosens the surface of the soil; it is also fine for cleaning walks; the seed furrow opening tooth is also very useful for its purpose. The rake attachment will level and fine the soil in preparing seed beds, and is a useful attachment for killing small weeds and surface cultivation. Price, complete, as shown in the cut, \$4.25.

THE PLANET, JR. CATALOGUE MORE FULLY DESCRIBING AND ILLUSTRATING THEIR FULL LINE OF HAND AND HORSE POWER IMPLEMENTS, Mailed to Applicants

For HENDERSON'S Special
HILL AND DRILL SEEDER
and WHEEL HOE see page 53

Fire-Fly Hand Garden Plow.

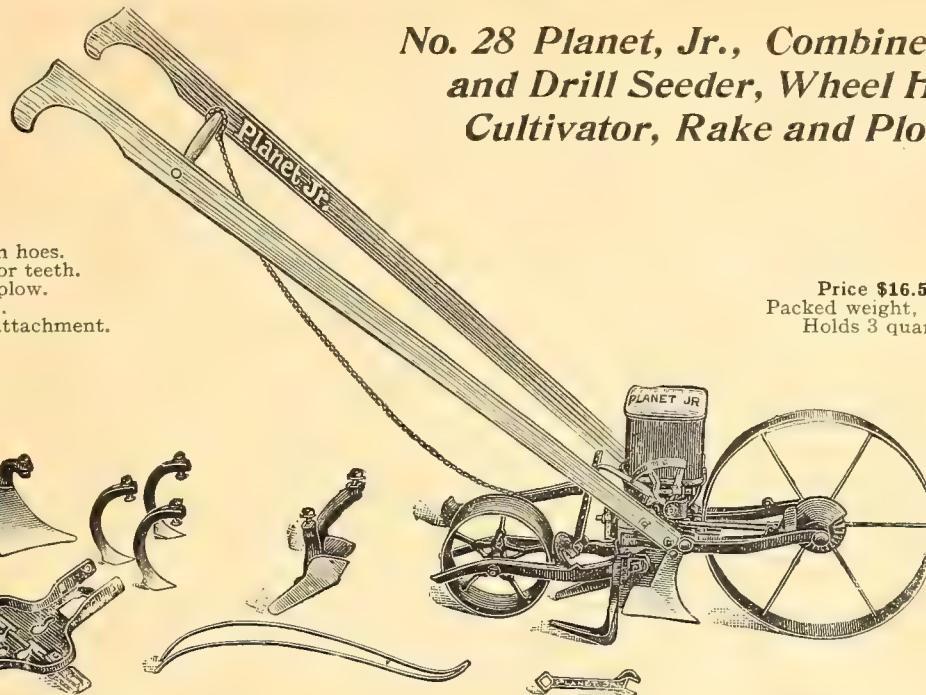


This tool is exceedingly useful to owners of small gardens. It will throw a furrow four to six inches wide and one to three inches deep, and deeper by going twice. Furrows for manure or seeds can be opened and covered. In Cultivating, plow away, weed and plow back again. This tool will enable a busy man to do in his spare minutes nearly all the work of a family garden. Chicken Raisers find it of great advantage in plowing up their scratching yards.

Price, \$2.75.

Equipment:
One pair 6-inch hoes.
Three cultivator teeth.
One landslide plow.
One leaf guard.
One marking attachment.

Price \$16.50
Packed weight, 64 lbs.
Holds 3 quarts.



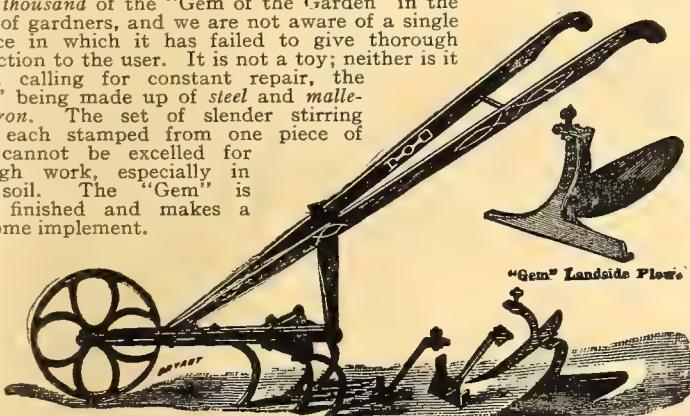
It is the most accurate seeder in action and the nearest perfect in construction that we have ever offered. Accuracy of construction makes for accuracy in operation and it saves seed and labor and insures an even stand of plants and a correspondingly satisfactory crop.

As a Seeder it drops all garden seeds in hills, 4, 6, 8, 12 or 24 inches apart, or sows them in drills with accuracy, opening the furrow, covering, rolling down and marking the next row all at once. The seeds drop in full sight of the operator the rear of the spout being open and white.

The "Gem of the Garden" Single Wheel Hoe and Cultivator.

A WONDERFULLY POPULAR GARDEN IMPLEMENT.

No greater proof can be given of the popularity of a tool, or of its intrinsic worth, than the one simple fact of a *continued* and increasing demand for it. During the past few years we have placed about fifteen thousand of the "Gem of the Garden" in the hands of gardeners, and we are not aware of a single instance in which it has failed to give thorough satisfaction to the user. It is not a toy; neither is it a tool calling for constant repair, the "Gem" being made up of *steel* and *malleable iron*. The set of slender stirring teeth, each stamped from one piece of steel, cannot be excelled for thorough work, especially in hard soil. The "Gem" is nicely finished and makes a handsome implement.



Price, plain, with five teeth only, \$4.75; with Scuffle Hoes, Plows and Cultivator Teeth, \$6.25. Land Side Plow, extra, \$1.15.

Rapp's Hand Seed Sower.

For Frame and Hot Bed Sowings.

This is the invention of a practical market gardener of long experience who felt the need of such a sower to avoid kneeling, reaching and back-aches. It is light, weighing only $2\frac{3}{4}$ lbs., and sows all kinds of seeds not larger than spinach seed, thin or thick as set, and five times faster than by hand, and it sows equally well going forwards or backwards; consequently it is pushed along one furrow and pulled back in the next, thus saving time and lifting. The revolving brass covered drum holds one pint of seeds which drop through holes in a brass band which can be shifted to make the opening larger, smaller, or to shut off the flow of seed. The Rapp seed sower is a homemade affair; it does not open furrows nor cover the seed, therefore is so simple that it can be used by the most inexperienced. Price, \$3.50.



The "New Model" Seed Drill.

A favorite—retaining its popularity where known, on account of its simplicity. Our Market Gardener friends tell us it is the one seed drill that they can safely put in the hands of ignorant or unskilled workmen, knowing that they can not go over the ground without sowing the seed. The "New Model" Seed Drill does not plant in hills, but it is one of the best continuous row seeders on the market. The discharge can be regulated to a hair's breadth, by moving a simple index to the name of the seed to be sown. The flow of seed can be instantly cut off for turning rows, etc.; opens the drill, sows the seed, covers and rolls the seed, and marks the next row all at one operation.

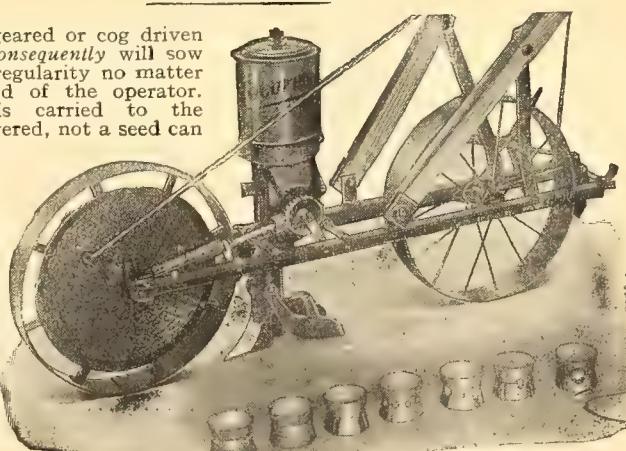
Price, \$10.00.

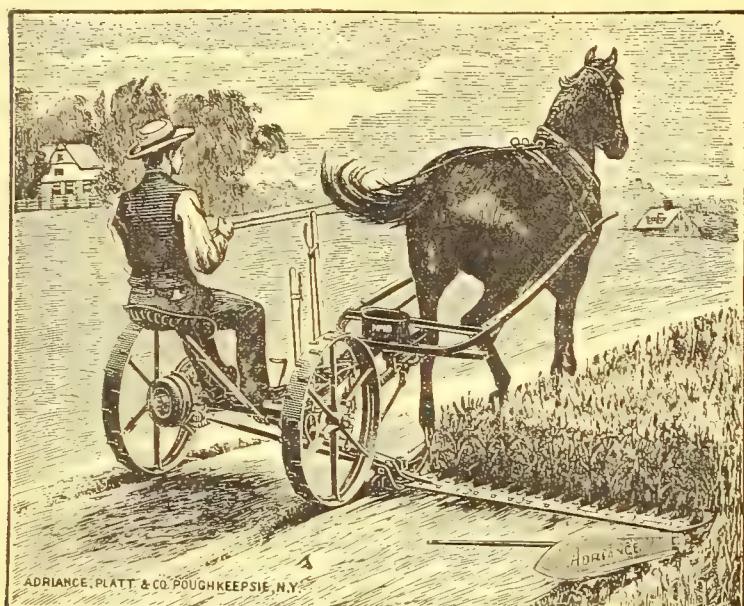


The "New Model" Seed Drill
Price, \$10.00

The Columbia Garden Seed Planter.

Made with geared or cog driven seed delivery, consequently will sow with absolute regularity no matter what the speed of the operator. Every seed is carried to the ground and covered, not a seed can escape nor pass through the machine unless the machine is in gear and ready to do its work. It will sow all vegetable and flower seeds with perfect uniformity and at any required depth. Full instructions with each machine. Price, \$10.50.





GENUINE ADRIANCE MOWERS.

These famous and reliable machines are the standards of America. Made scientifically correct, embodying all practical improvements to date. The frame is symmetrical light, simple but thoroughly strong, and is fitted with roller bearings and brass composition bushings. The driving wheels are large and wide apart, clearing the swath and carrying all weight, well divided to give equal power to either wheel. The driving wheels do not lift when the bar strikes an obstruction, insuring safety. The self-adapting finger bar is carried, not dragged. There is no side draft, and smooth cutting is assured. The height of cut is quickly adjusted, and can also be varied while mowing by the tilting lever—the levers are easily operated by hand or foot. It is the lightest draftmower on the market.

PRICES FOR TWO-HORSE ADRIANCE MOWERS.

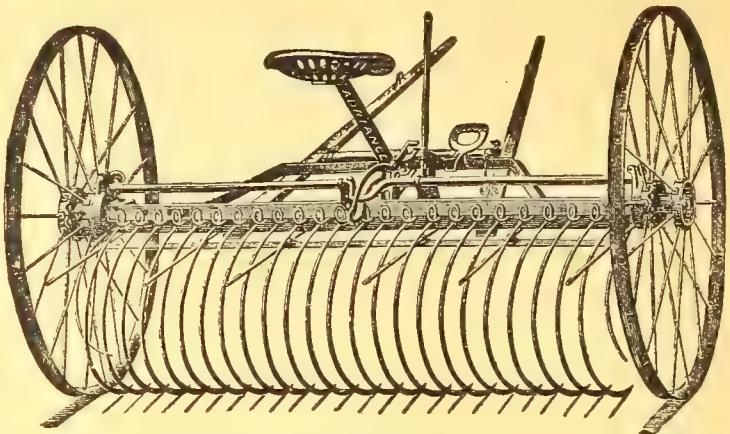
4½-foot cut \$55.00 5-foot cut \$56.00

ADRIANCE ONE-HORSE MOWER.

The Best and Most Popular One-Horse Mower Made.

This mower is made entirely from patterns especially designed for a small machine, and is so proportioned as to secure the necessary strength consistent with lightness of draft. It has all improvements—hand and foot levers working independently or together—and is a very popular and satisfactory machine. Is especially used on rough or obstructed ground, where a team and a long cutter bar is troublesome to manage; and is also useful on large lawns, leaving a clean, neat stubble, even in short grass.

Price One-Horse Adriance Mower, 3½-foot or 4 foot cut \$50.00

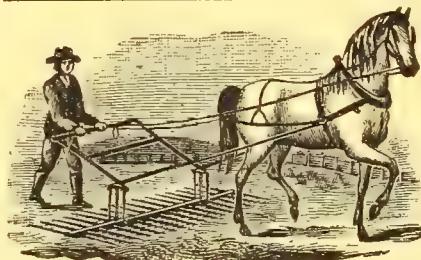


ADRIANCE All Steel SULKY HAY RAKE.

With this improved rake the hay is slid along the ground, and when dumped, the damp under portion is left on top. The shape of the teeth is such that they do not scratch the ground, but rake the stubble and leave all rubbish on the ground. It has a most accurate and durable dumping arrangement, and under perfect control. The driver simply presses the dump lever lightly with one foot, and the teeth rise high in the air and return at the proper time without any effort on the part of the driver. These Rakes are fitted with steel cleaner rods; it is dumped by either wheel alone, and can be dumped in any position the Rake may be drawn; large, easy steel seat that can be raised or lowered to suit driver; a foot lever by which the teeth can be held down to their work in carrying an extra large load, or the same lever will hold the teeth up for driving on roads and across fields; the combination "Pole and Shafts" supplied with these rakes enables them to be used with either one horse or a team by uniting the shafts. The steel wheels are widely staggered giving great strength for resisting side and twisting strains. In addition to the number of raking teeth every rake has a guard tooth at each wheel.

PRICES.

8-foot Rake with shafts,	24 teeth, \$26.50	30 teeth, \$27.00
9- " " With combination	28 " 27.50	35 " 29.00
10- " " thills and pole	32 " 30.00	40 " 30.50



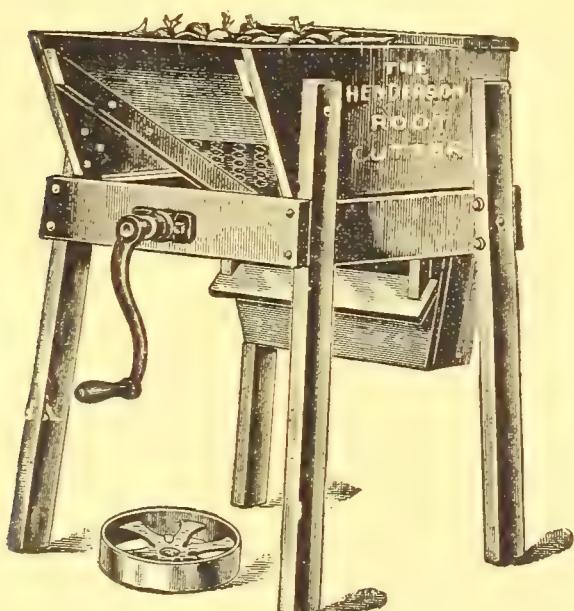
Improved Wooden Revolving Horse Hay Rake.

For raking heavy grass the Revolving Rake has no superior. For this particular purpose we recommend it as being even better than the Wheel Rake. They are of the most approved kind, and are made in the most substantial and durable manner. 16 hickory teeth. We pack them snugly for shipment. Price, \$10.00.

THE HENDERSON ALL-IRON ROOT CUTTER.

Made entirely of Iron and Steel. A positive feed—it must cut the roots: cannot get away from the knives. This cutter has 19 gouge shaped steel knives, fastened from the inside with two bolts to a cast iron cone shaped drum. The drum is driven by gear wheels with the power in favor of the operator, so it makes an easy running root cutter with good capacity. Hopper 24-inches diameter at top, 11 inches at bottom, 16 inches deep, weight, 100 lbs. Capacity 45 to 60 bushels per hour.

Price, complete \$15.00.

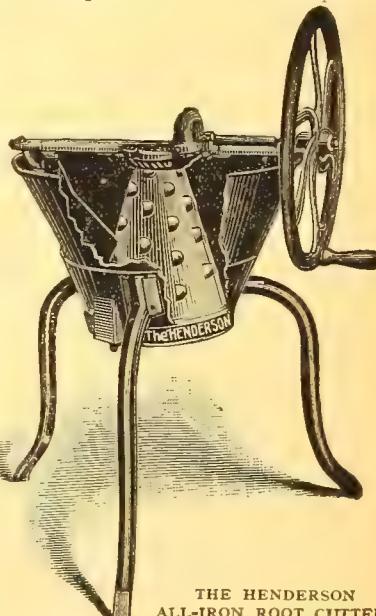


THE "BANNER" ROOT AND VEGETABLE CUTTER.

The "Banner" Root Cutter is, without question, the best ever invented; it contains features found in no other machine; it has a self-feeder; separates the dirt from the cut feed, and leaves the cut food in such condition that stock cannot choke. The pieces are cut in long, half-round slices, and are not crushed, ground or torn; even young lambs can safely be fed with roots cut with the Henderson cutter.

No. 02. Hand power, capacity, 30 to 50 bu. an hour \$12.00
 No. 51. The above fitted with pulley for power capacity,
 60 to 80 bu. an hour 14.00

No. 61. Hand and small power Cutter, fitted with balance wheel crank and pulley capacity, 120 to 180 bu. an hour.....	20.00
No. 01. Exclusively Power Cutter capacity, 4 to 6 bu. a min.....	30.00
No. 70. Poultry and Lamb Food Cutter.....	5.00



THE HENDERSON
ALL-IRON ROOT CUTTER.

"Clipper" Hand Lever Feed Cutter.



The "Clipper" Lever Cutter is a strong framed machine, and the most simple cutter made, and we recommend it to all who have but a moderate amount of feed to cut. It will cut 15 bushels an hour.

We furnish all with the gauge-plate, with which short feed can be cut much faster than without it.

It can also be changed to make any length of cut. Price, \$4.75.

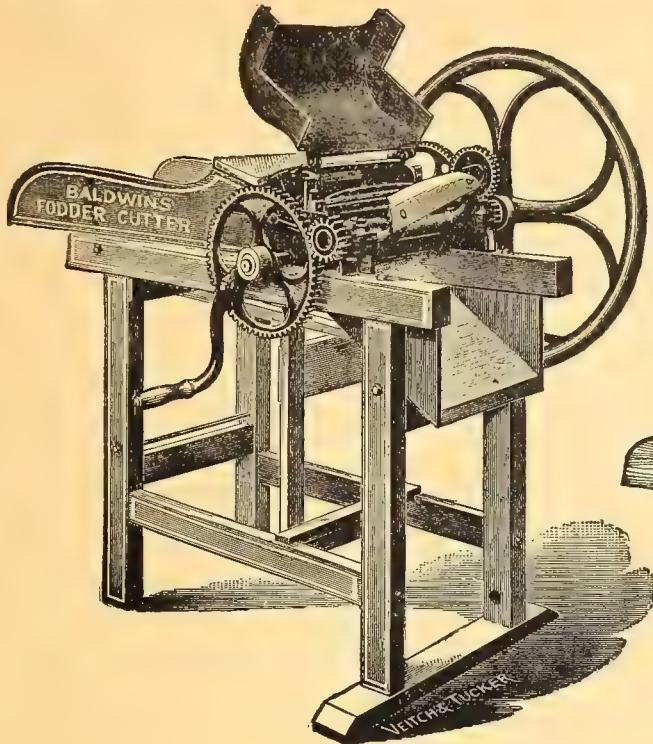
The "Black Hawk" Corn Sheller.



Fastens to a box quickly and securely by clamps which are furnished free with each machine.

It is recognized as a standard sheller and no machine has ever given more universal satisfaction.

The "Black Hawk" Sheller shells corn for home use and poultry. Its construction is such that it cannot choke, is durable, malleable iron is largely used in its construction. Bearings that are subject to wear are long and thoroughly chilled. It will last a lifetime, is simple, easily adjusted and will shell clean all kinds of field corn. Price, \$2.25 each.



The Baldwin Hand Power Fodder Cutters.

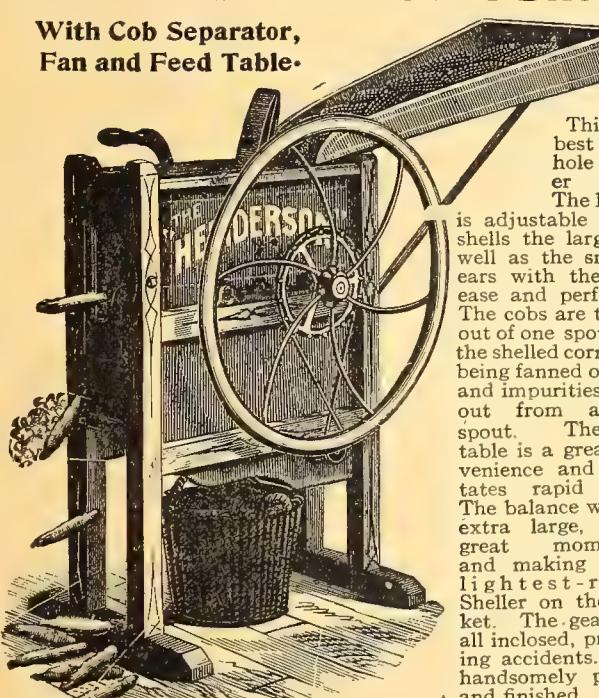
The latest improved and best hand power cutters made. They cut rapidly and easily all kinds of fodder, hay, straw, cornstalks, etc. Adjustable self feeding iron rolls. The revolving knives of finest steel give a shear cut. Length of cut quickly changed. Substantial and durable.

Price Net.

No. 1.—Our smallest cutter for one or two head of stock; has one 6 inch knife, cuts $\frac{1}{4}$, $\frac{1}{2}$, $1\frac{1}{2}$ and 2 inches.....	\$20.00
No. 9.—For three or four head of stock; has two $8\frac{1}{4}$ inch knives, cuts $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1 inch.....	25.00
No. 10.—For five to eight head of stock; has two $9\frac{1}{2}$ inch knives, cuts $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1 inch.....	29.50
No. 11.—For ten to twenty head of stock; has two 11 inch knives, cuts $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1 inch.....	34.00

The "Henderson" Corn Sheller.

With Cob Separator, Fan and Feed Table.

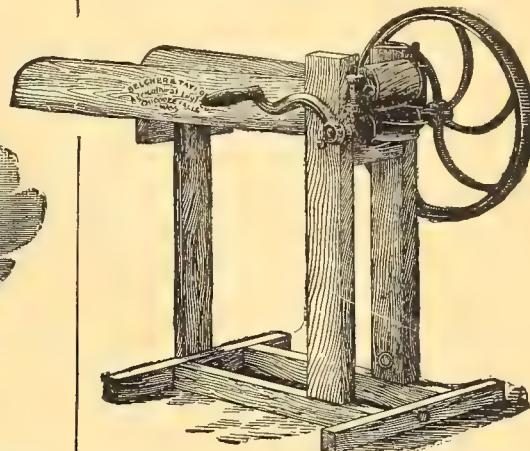


This is the best one-hole Sheller made. The hopper is adjustable and it shells the largest as well as the smallest ears with the same ease and perfection. The cobs are thrown out of one spout and the shelled corn, after being fanned of chaff and impurities, flows out from another spout. The feed table is a great convenience and facilitates rapid work. The balance wheel is extra large, giving great momentum and making it the lightest running Sheller on the market. The gearing is all inclosed, preventing accidents. It is handsomely painted and finished.

PRICE, complete (as shown in the cut).....\$13.00
" Without Feed Table.....12.00

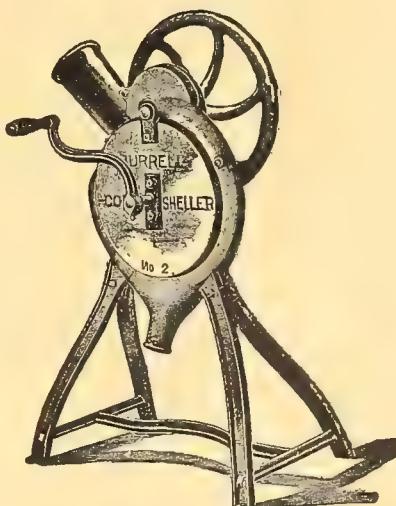
Spiral Knife Hide Roller Feed Cutter.

A reliable old favorite low-priced Cutter, and one of the best for cutting hay and straw, but not calculated for stalks. The knives cut against a hide roller, which revolves with the cylinder, making it a self-feeding Cutter. Any one knife may be taken off and ground without removing the whole number.



No.	Number of Knives.	Length of Knives.	Length of Cut.	Price.
00	4	6 inch	2 inch	\$10.00
0	5	6 inch	1 $\frac{3}{4}$ inch	11.50
1	6	6 inch	1 $\frac{1}{2}$ inch	13.50
2	7	6 inch	1 $\frac{3}{4}$ inch	14.75
3	8	6 inch	1 $\frac{1}{4}$ inch	17.00
4	9	6 inch	1 $\frac{1}{2}$ inch	18.00
5	6	7 inch	1 $\frac{3}{4}$ inch	19.00

Burrall Improved Corn Sheller.



An all-iron and very durable one-hole Sheller. It shells both large and small ears and separates the corn from cob perfectly. One man can turn and feed at the same time.

Capacity, 100 bushels per day. It has been a popular sheller for years and with the present improvements is better than ever. Price, \$9.00.

SCHROETER'S NEW MODEL GRATERS.

For Grating Horse Radish, Almonds, Cocoanut, Carrots, Potatoes, Pumpkins, Cheese, Pineapple, Crackers, Bread, etc.

All horse radish and other articles grated with these machines come through light, short and flaky, entirely different from the hard indigestible stuff that comes through a meat chopper. The grating drums are of the very best heavy tin, punched with patent shaped teeth that cuts the material instead of tearing it off. The machines in all other respects are made in the best manner of high class materials are simple, durable, easily operated and quickly cleaned.

Schroeter's Family Size Grater, No. 10.

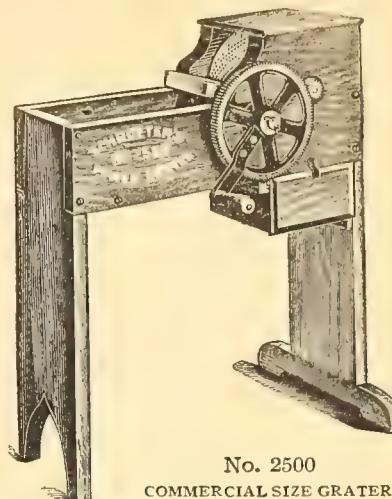
A convenient size for the ordinary small family. Attaches to any table with thumb nut, drum removable for cleaning; dimensions (exclusive of handle) height 13 in., width 5½ in.; drum 3½ in. diam. 3½ in. wide. Hopper opening 2½ x 2½ in.; finish dark blue, striped gold. Price, \$1.50. (Mail weight, 3½ lbs.)

Schroeter's Hotel Size Grater, No. 500.

A special size for grating quantities sufficient for hotels, restaurants, meat markets, bakeries, confectioners, as well as for large private families. It grates very rapidly, requiring not longer than 1½ minutes to grate a large root of horse radish. Dimensions: 15½ in. high; 8 inches wide; 3 inches deep; grater drum, 6½ in. diam. by 3½ in. wide. It clamps to any table by two thumb nuts. Price, \$5.00. (Shipping weight 15 lbs.)

Schroeter's Commercial Size Grater, No. 2500.

Designed for either hand or motive power, being supplied with both crank handle and a 6 x 2½ inch pulley. The gearing is of heavy high grade iron, machine and fitted to work with slight friction and without noise. The open trough in front holds the roots to be grated. The drawer under the drum catches the grated material. The machine operates easily and accomplishes the work rapidly. Dimensions: height 38 in., length 30 in. and width 10 in.; drum 10 in. diam. by 5½ in. wide, weight 75 lb. or crated 106 lb. Price \$25.00.



No. 2500
COMMERCIAL SIZE GRATER.

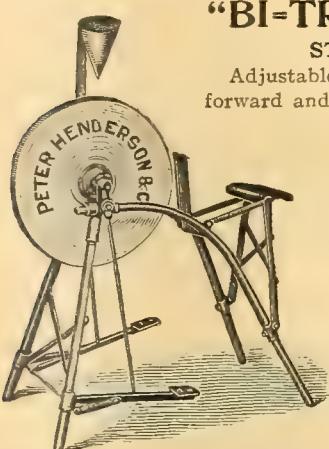
"BI-TREADLE" GRINDSTONE.

STRONG, TUBULAR STEEL FRAME

Adjustable seat, 4 in. to 5 in. vertically. Stone movable forward and back on frame. Frame being slightly flexible it adjusts itself to uneven floor or surfaces. Rigid and easily set up. Bi-Treadle, with power properly applied. Hinged connection with ball-bearings on crank. Ball bearings in journals.

Frame is narrow at top, making it convenient to apply power, and spread at base giving greatest rigidity.

Crated complete, with face of stone protected. Made in one size, average weight stone 60 pounds. Shipping weight 90 pounds. Frames will carry larger stones to 28 in. diameter if wanted and will be quoted on application. Price, \$7.00.

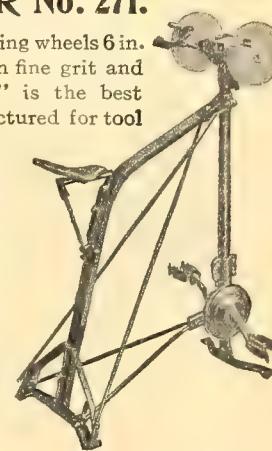


The HUMMER GRINDER No. 271.

This outfit consists of two Dimo-Grit grinding wheels 6 in. in diameter by 1½ in. face one being of medium fine grit and the other of coarse grit. This "Dimo-Grit" is the best abrasive substance yet discovered or manufactured for tool sharpening and grinding steel cast iron and similar metals and is in universal use in factories and machine shops. These grinding wheels are mounted on a sturdy compact iron framework fitted with seat and foot treadle attached to gearing which rapidly revolves the grinders with greatest ease. The head can be swiveled to any angle.

The balance of the outfit comprises a universal tool rest and a chisel and plane bit guide so that tools etc. may be sharpened and ground to the exact bevel desired.

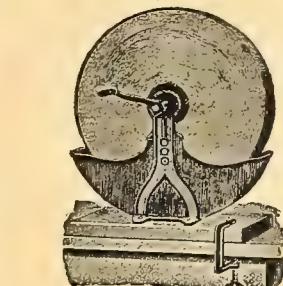
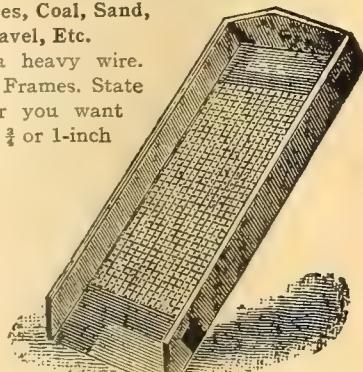
Price, as above described \$15.00.



HANDY SCREENS.

for Ashes, Coal, Sand, Gravel, Etc.

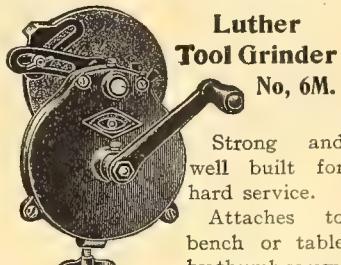
Extra heavy wire. Spruce Frames. State whether you want ¼, ½, ¾, or 1-inch mesh.



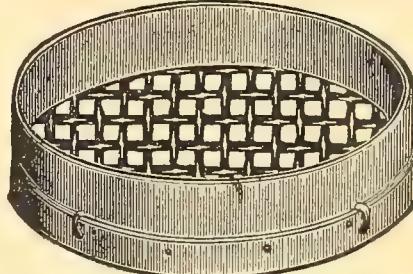
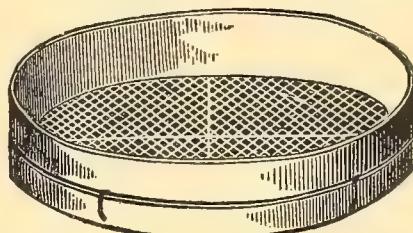
FAMILY GRINDSTONE.

Mounted, cast iron basin and clamp to fasten to table. Prices 6 in. (diameter), \$1.25. 8 in., \$1.50. 10-in., \$1.85; 12-in., \$2.25.

Small size, 25x62 inches..... \$8.00
Large size, 28x66 inches..... \$9.00

Luther
Tool Grinder
No. 6M.

Strong and well built for hard service. Attaches to bench or table by thumbscrew. Grinding wheel of carborundum, the best material for sharpening tools, etc. Equipped with a combination adjustable tool rest. Gear case 22 inches in diameter; grinding wheel 6x1 inch making 16 revolutions to one of the handle. Packed weight 14 lbs. Price, \$4.50.



EXTRA HEAVY FLORISTS' RIDDLES.

Superior Galvanized Riddles.

Do not rust; the wires cannot slip so as to form irregular openings, hence a perfect separation is always obtained; the wire cannot be pulled from the rim and will not sag in the middle. The numbers indicate the number of openings to an inch. No. 2 for gravel, etc.; 3, beans coarse sand, etc.; 4 corn and mason's sand, etc.; 5 and 6, fine sand, etc.; 8, wheat, rye, barley, etc.; 10 and over for special purposes. They are all 18 inches in diameter. Price, \$1.25 each.

Special Oat Sieves (No. 12), for taking dust out of oats before feeding. \$1.15 each.

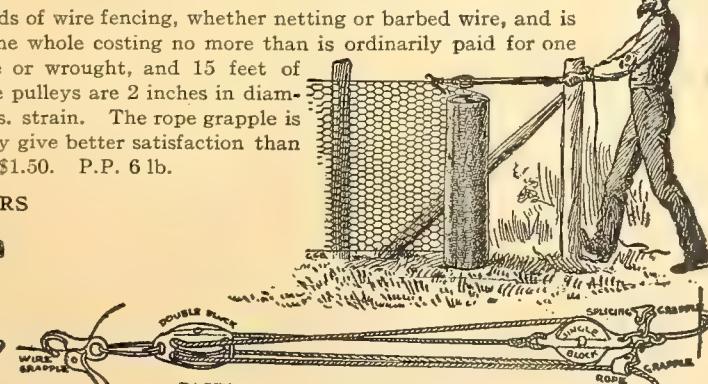
Extra Heavy Florists' Riddle, for rubbing moss, mold, cocoanut fibre and lumpy loam through. ¼, ½, ¾ and 1 inch mesh; 18 inches in diameter. \$2.00 each.

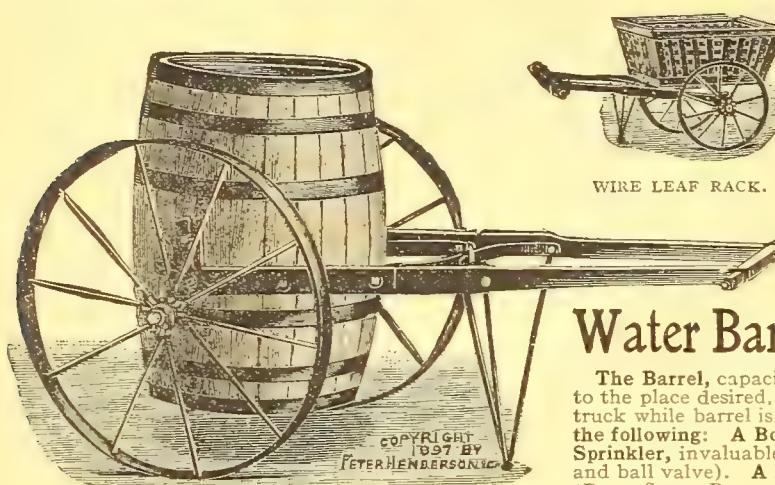
TACKLE-BLOCK WIRE STRETCHER.

This tool is a complete stretcher for all kinds of wire fencing, whether netting or barbed wire, and is a convenient set of pulley blocks besides, the whole costing no more than is ordinarily paid for one separately. All the iron is either malleable or wrought, and 15 feet of manila rope is furnished with each set. The pulleys are 2 inches in diameter. They are strong enough for 1,000 lbs. strain. The rope grapple is very convenient and quickly adjusted. They give better satisfaction than any wire-stretchers ever introduced. Price, \$1.50. P.P. 6 lb.

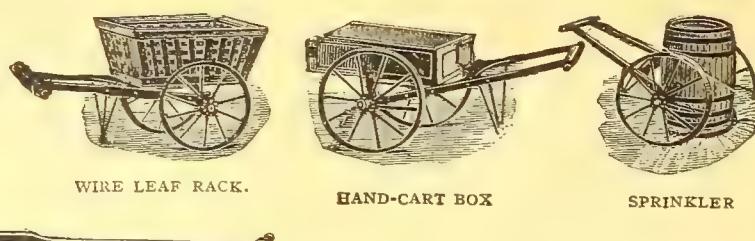
"BEST STEEL" COMBINED WIRE PLIERS
AND CUTTERS.

5 in., 50, P.P. 1 lb.;
3 in., 70c., P.P., 1 lb.; 10 in., 90c., P.P., 2 lb.





WIRE LEAF RACK.



SPRINKLER

HENDERSON'S "MAN-SIZE" Water Barrel Trucks and Accessories.

The **Barrel**, capacity about 50 gallons, is raised from the ground, carried to the place desired, and can be readily disconnected from or attached to the truck while barrel is either full or empty. We supply as extra attachments the following: A **Box** with trunnions and spring catch, making a very superior **dumping hand-cart**. A **Sprinkler**, invaluable for watering lawns and sprinkling walks (water is turned on and off by hand wheel and ball valve). A **Leaf Rack**, very useful for removing leaves and litter. A **Force Pump** for Spraying, etc. (For a Spray Pump we recommend our "Fruitall" offered on page 58.)

PRICES OF HENDERSON'S "MAN-SIZE" WATER BARREL TRUCKS AND ACCESSORIES.

Water Barrel-Truck 1½ in. tire \$11.00, with 50 gallon barrel.....	\$15.00	Hand-cart Box Extra.....	\$4.50
" " 2½ " " 12.00 " " " " 16.00		Leaf Rack " " " 7.00	
" " 3½ " " 13.00 " " " " 17.00		Sprinkler attachment..... 4.00	
Extra 50 gallon barrel, with trunnions on.....	4.00	Extra trunnions, per pair..... .76	

Fig. A.

Indispensable for handling fruit, garden truck, grain or anything in baskets, boxes or kegs.

Platform hangs low, rides level, easily loaded and unloaded.

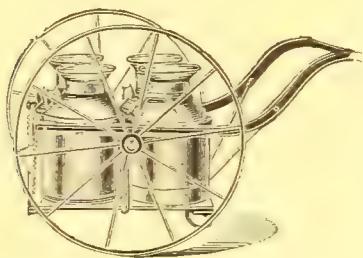


Fig. B.

Holds four milk cans. In great demand in the creamery and dairy; low platform saves heavy lifting.

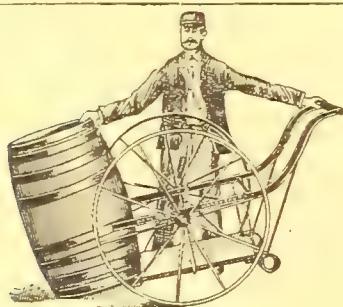


Fig. C.

Tilts forward and picks up a barrel or heavy article like a warehouse truck. Any barrel can be handled. Useful for spraying.

Small or 30 Gallon Size Barrel and Truck.

A very convenient outfit easily pulled about and of sufficient capacity for many purposes. The various accessories may be purchased separately or in combination. The truck has 30 inch iron wheels with 2 inch rims. The barrel is about half size—holding 30 gallons, spray pump easily attached. The box is 20½ x 39½ x 7 inches, handy for carrying tools, garden truck, etc. the rack is 20 x 54 x 24 inches, very handy for collecting leaves, litter and bulky garden and farm products. For a spray pump suitable for this 30 gal. bbl., we recommend our Fruitall offered on page 58. Price, Truck only \$9.50; Barrel with trunnions \$2.50; Hand Cart box \$4.00; Rack, \$7.00



The Butler Steel Hand Cart.

The Butler Steel Hand Cart fills the want for a two-wheel cart better than any other invention. Its usefulness is *unlimited*, and is not confined to one special purpose.

It will handle fruit, garden vegetables, grain, leaves, cut grass, trash, ensilage, manure, fertilizer, tools, barrels, kegs, boxes, packages, etc. Nothing equals its perpetual usefulness about the lawn, yard, stable, farm, dairy creamery, garden and orchard.

Light in weight, great strength and easily handled. If numbers sold is any criterion of merit, this is unquestionably the cart of the future.

DESCRIPTION.

Wheels.—Steel, 36 inches high. **Tires.**—Regular, 2½ inch, or 3-inch. **Width.**—Between wheels, 36 inches; from out to out of hub, 42 inches. **Axle** and all frame parts steel. Will easily sustain a load of 500 lbs. **Platform.**—Hard Wood, 28 x 32 inches. **Side Boards.**—15 inches high, hard wood, instantly removable, leaving cart in shape for handling barrels, boxes, milk cans, etc. **Flaring Hopper.**—Sides and ends extend 12 inches above the box. **Painting.**—Body red, neatly striped; wheels bright green.

PRICES.

BUTLER STEEL HAND CARTS.

With 2½ in. Tire		With 3 in. Tire.	
Price.	Weight.	Price.	Weight.
No. 1. Plain, without box (Figs. A, B, C)	\$10.00	95 lbs.	\$12.00
No. 2. With detachable box (Figs. D, E, F)	14.00	125 "	16.00
No. 3. With detachable box and Flaring Hopper (Fig. G).....	18.00	150 "	20.00
		180 "	

Note.—Unless otherwise ordered, we send 2½ inch tire wheels.

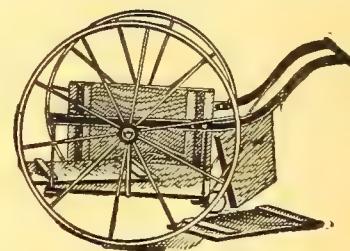


Fig. E.

Side boards and ends can be put on or taken off in a few moments. Easily loaded as a wheelbarrow.

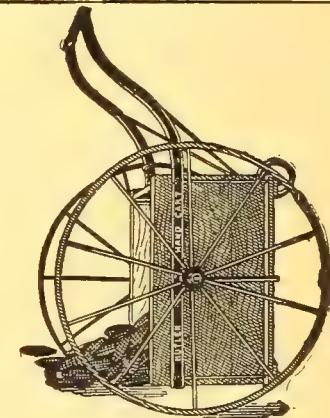


Fig. F.

Can be turned over and load dumped without shoveling.

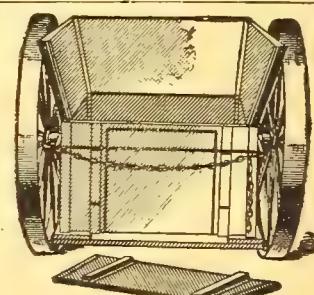


Fig. G.

Flaring Hopper.—Sides and ends 12 inches high, extend upward and outward from the regular cart box, for handling leaves, trash, grass, ensilage, manure, etc. Capacity, 13 cubic feet, or about 11 bushels. Showing wheels with 3-inch tires.

The Ball Celery Bleaching Tubes.

JUST THE THING FOR QUICKLY AND EASILY
BLANCHING EARLY CELERY.

ELIMINATES THE LABOR OF "BANKING UP" OR BUYING, HUNTING UP AND PLACING BOARDS, JUST SLIP ON A "BLEACHING TUBE" AND IN 10 TO 15 DAYS HAVE WHITE CRISP LUCIOUS CELERY.

The Ball Celery Bleaching Tubes are of specially manufactured heavy paper, waterproofed and with care may be used over and over again for several years. The celery plant is simply drawn together and the tube slipped over it (if the Spring Brass Celery Handler is also used it facilitates the operation) all light is then excluded and the celery blanches beautifully in from 10 to 15 days time. If there are any openings beneath the tube, an inch or two of soil drawn around the tubes will shut out the light. Celery blanched with tubes is sweeter and cleaner than that blanched by banking, for there is no earthy flavor as with the latter, and no soil with the frequent accompaniment of worms gets down into the heart stems, and besides

celery may be had for the table very much earlier in the fall, because by using tubes they may be placed over the plants at any time after the celery is large enough, even in hot moist weather which would cause banked celery to rot. The free circulation of air around the plant inside the tube allows it to dry out quickly after a rain. Customers who use these tubes place a few for first early, say—12 or 25 tubes over as many plants and in a week or 10 days later tube another lot of plants, then as the tubes are removed from the first lot they are placed over other celery plants in this way a continuous supply of fresh crisp sweet and delicious celery is always ready for the table until freezing weather. For the benefit of those who have used only the soil method of bleaching we mention that celery should be nearly full-grown before putting on our bleaching tubes. At this time, with plenty of moisture, heart growth is very rapid. Under these conditions celery will often be in prime condition in from 8 to 14 days after putting on the tubes.

These bleaching tubes are generally used on early celery in the Northern and Middle States, also in the South where the temperatures are too high for soil bleaching. For best results they should not be used for bleaching when freezing temperatures occur at night. They bleach best when outside temperature is from 50 to 75 or more degrees. If you desire to bleach the green or late varieties of celery it is best to put on the bleachers a week or more earlier so as to give a longer period for the growing of the heart, as the outside stalks don't bleach very well. All plants should, of course, be large enough to reach above the top of bleaching tubes at the time that you put them on.

Green celery treated in this manner makes a superior product. For the late or winter crops where a clean and superior celery is desired these bleachers can be put on just before banking with soil; they will prevent dirt from entering the heart of the plant. When used in this manner the bleachers can be only used once, but the superior results—sanitary cleanliness and freedom from dirt, more than compensate the cost, especially for private use.

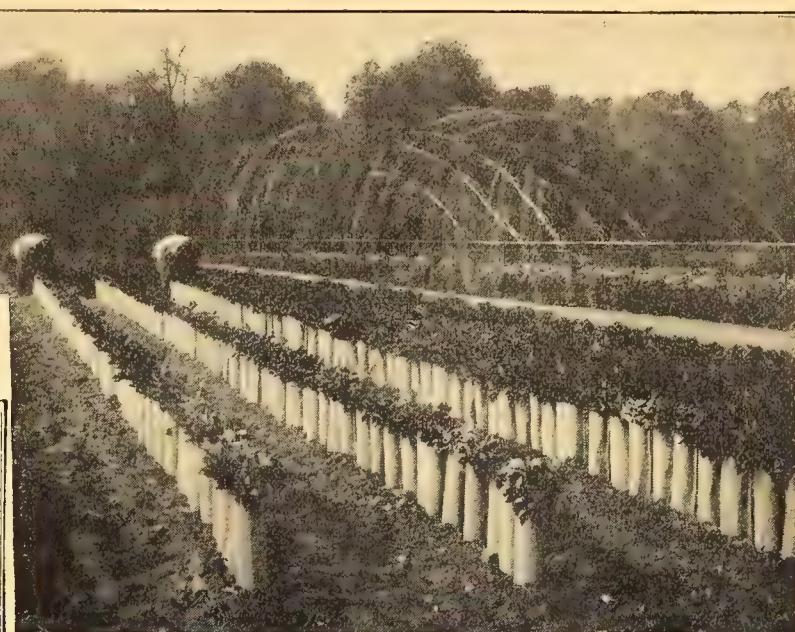
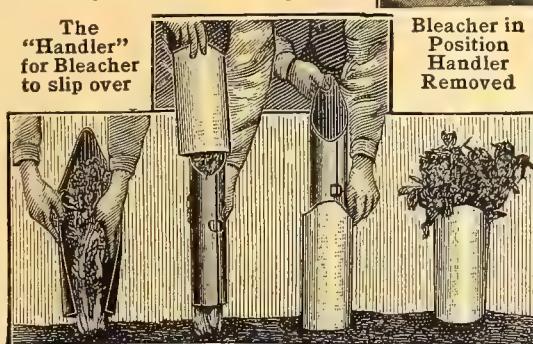
The 6 x 12 size is usually used on medium or average size celery. The 6½ x 13 for large stalks. The 7 x 14 is best for very big celery, especially the green varieties, which usually grow much larger than the self-blanching kinds.

The bleachers should hug the celery close, but not tight. If an unusually large plant is encountered trim off a few leaves.

PRICE OF THE BALL CELERY BLEACHING TUBES.

6 x 12 inch	30c. doz.	\$1.75 per 100	\$16.00 per 1000
6½ x 13 "	35c. "	2.00 "	18.00 "
7 x 14 "	40c. "	2.50 "	20.00 "

(mail weight about 2 lbs. per doz.)



THE BALL CELERY BLANCHING TUBES

THE BALL LIGHTNING CELERY HANDLER.

When putting on the paper bleaching tubes, it facilitates the operation by using the Ball Lightning Celery Handler. This is a spring brass implement which gathers up the foliage so that the bleaching tubes can be placed without damage to the plant. This operation is demonstrated in picture. With a little practice a boy can place 3000 to 4000 tubes a day. Price, \$3.50, (mail weight 3 lbs.)



BIRD NETTING TO PROTECT FRUITS, VEGETABLES, ETC.

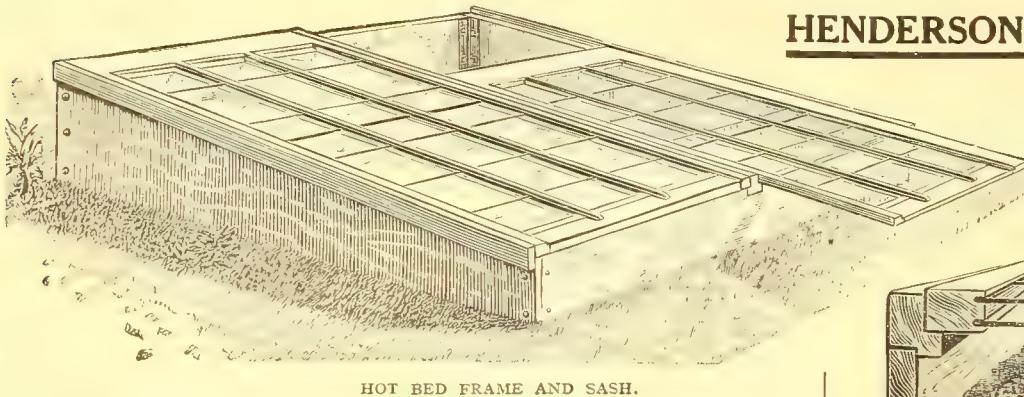
What is more exasperating than to anticipate a liberal picking of some fruit to find when you reach the garden that your bird neighbors have been there before you and consumed or destroyed the ripest and choicest berries, grapes or cherries of which some birds are voraciously fond. Lettuce and peas are often ravaged by birds, even flowers are not immune from their attacks and they revel among some plants ripening seeds. All this may be obviated by shutting the birds out with bird netting. This is good quality cotton netting of 1 inch mesh and comes in 20 foot and 30 foot widths and of any reasonable length. Price, \$1.10 per 100 square feet P.P. 1 lb.

THE BALL PLANT PROTECTORS.

These protectors are well made, a wood frame work covered with good white muslin which is drawn to a knob at the top to be used as a handle. The uprights project below the bottom bow and thrust in to the ground acting as an anchor to prevent the protectors from being displaced by the wind. These projecting legs also permit the protectors to be raised and held slightly above the ground when greater ventilation is desirable. The protectors are so shaped that they nest one in to another like flower pots for storage and shipment. They will last for years with good care and may be used over and over again for advancing the growth of tender plants and protecting them from frosts. Tomatoes, melons, cucumbers, egg plants, peppers and many other garden vegetables and flowering plants, may be safely set out much earlier than usual by using the Ball Plant Protectors which will also be found useful for shading lettuce and spinach during hot weather—which without some shade are apt to quickly bolt to seed. These protectors are also valuable placed over newly set out plants, preventing them from wilting as they give just the right shade.

Price, No. 1—9 in. diam. x 12 in. high \$2.50 doz.; \$18.00 per 100
No. 2—12 " " x 15 " " 3.00 " 22.00 "





HOT BED FRAME AND SASH.

HENDERSON'S "REGULATION" UNGLAZED HOT BED SASH.

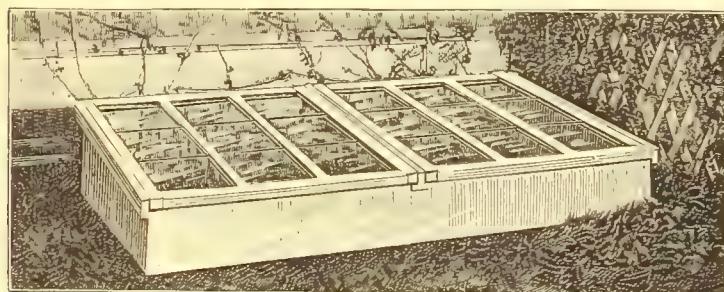
These sash are of No. 1 Gulf Cypress free from knots and sap. They measure 3 feet wide by 6 feet long and $1\frac{1}{4}$ inches thick. They take five rows of 6 x 8 inch glass (1 box of glass 150 panes glazes three sash). They are unpainted. They are well and durably made and we sell thousands of them every year with evident satisfaction to purchasers. Price, \$1.20 each; \$13.00 per doz.; \$100.00 per 100. F.O.B. N. Y.

HENDERSON'S "EXTRA FINE" UNGLAZED HOT BED SASH.

These are made of selected Red Gulf Cypress, free from knots and sap. They have finished edges and an iron crossbar in the center. Size 3 feet wide by 6 feet long and $1\frac{1}{8}$ inches thick, and take three rows of 10 x 12 inch glass (1 box of 60 panes of glass glazes three sash). They are unpainted, but the joints were white leaded before being put together. They are largely used on private places and by florists and gardeners who wish less shade than is cast by five row sash. Price, \$2.00 each; \$22.00 per doz. F.O.B. N. Y.

HENDERSON'S "EXTRA FINE" GLAZED SASH.

This is the same sash we describe above, 3 x 6 feet, $1\frac{1}{8}$ inches thick, painted two coats of white and glazed with three rows of double thick, 10 x 12 inch glass. Price, \$4.00 each; \$45.00 per doz. F.O.B. N. Y. Packing for shipment 50c. per crate extra. (See note below regarding packing and shipping glazed sash).



"HALF-WIDTH" FRAME AND "HALF-LENGTH" SASH.

HENDERSON'S "HALF" SASH AND FRAMES

These are very convenient for small gardens, especially where frames are to be placed against a fence or building, thus precluding the possibility of getting at them from both sides. In such situations it is difficult to reach clear back from the front without stepping in the frames as must be done with the full size 6-foot sash. These "Half Length" sash are 3 feet wide by 3 feet in length covering the "Half Width" frames which are 34 inches in width. Another advantage that the "Half Length" sash possess is their lightness being easily handled by a child or lady.

HENDERSON'S "HALF LENGTH" SASH UNGLAZED.

These are made in the best manner of A1 Gulf Cypress, $1\frac{1}{2}$ inch in thickness and 3 x 3 feet square, taking three rows of 10 x 12 inch glass (1 box of 60 panes glazes 6 "Half" sash). Price, \$1.15 each; \$12.50 per doz. F.O.B. N. Y.

HENDERSON'S GLAZED "HALF LENGTH" SASH.

These are the above described "Half" sash painted two coats of white and glazed with double thick 10 x 12 inch glass. Price, \$3.00 each; \$33.00 per doz. F.O.B. N. Y. Packing for shipment 35c. per crate extra. (See note below regarding packing and shipping glazed sash).

HENDERSON'S "DOUBLE-LIGHT, HALF-LENGTH" SASH.

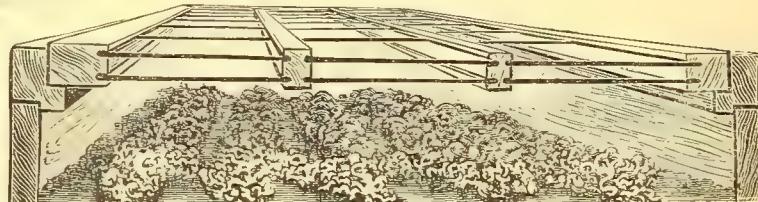
These possess all of the advantages of the full size "Double-Light" sash described above, but are only half the size, viz.: 3 x 3 feet square, they are painted two coats of white and glazed with three rows of 10 x 12 inch glass on top with bottom rows of glass slid in grooves on the under side. Price, \$4.00 each; \$45.00 per doz. F.O.B. N. Y. Packing for shipment 35c. per crate extra. (See note below regarding packing and shipping glazed sash.)

Special Note Regarding the Packing and Shipping of Glazed Sash.

For shipment, glazed sash must be crated and boarded up on both sides, for which an extra charge is made of 50c. per crate for full size, 3 x 6 ft. sash, and 35c. per crate for "Half-Length," 3 x 3 ft. sash. Up to six sash can be packed in one crate. We cannot allow for any breakage.

HENDERSON'S SASH AND FRAMES

FOR HOT BEDS, COLD FRAMES AND COLD PITS



SECTIONAL VIEW OF "DOUBLE-LIGHT" SASH.

HENDERSON'S GLAZED "DOUBLE-LIGHT" SASH.

"Double Light" Sash have two layers of glass, an upper one glazed in the usual way, and a lower layer which is slid into grooves on the underside of the sash, thus leaving an air space between the two layers that acts as an air cushion or insulator keeping the cold out and the warmth in thus rendering the use of mats or shutters in severe cold weather unnecessary. The plants therefore receive the full benefit of sun and light every day in localities where there is not much snowfall—unless the snow can be swept off—which is of great advantage especially during the short winter days. Henderson's "Double Light" Sash is made of best Red Gulf Cypress, painted two coats of white and contains three rows of 10 x 12 inch double thick glass. Size of sash 3 feet wide by 6 feet long. Price, \$6.00 each; \$65.00 per doz. Packing for shipment 50c. per crate extra. (See note below regarding packing and shipping glazed sash).

HENDERSON'S HOT BEDS AND COLD FRAMES.

Made of best cypress lumber, planed and painted two coats. The corners join by bolting on angle irons. The rails between the sash are rabbeted for the sash, grooved for drip and dove-tailed into the sides. Strong, durable and portable. Can be taken down for convenient storage when not in use; 8 inches deep in front, 16 inches deep at back. We ship them "knocked down," but they are quickly and easily put together by any one.

Prices DO NOT include sash (for prices of sash, see opposite column).

No. A.—For 2 3 x 6 ft. sash.... \$10.00 No. C.—For 4 3 x 6 ft. sash.... \$15.00
No. B.—For 3 3 x 6 ft. sash.... 12.50 No. D.—For 5 3 x 6 ft. sash.... 18.00

HENDERSON'S DEEP COLD PITS.

For wintering bulbs, carnations dormant roses, etc.

Above ground they are the same as the hot bed frames offered above, and, in addition, have posts and 2-inch lumber for siding up the excavation, 18 inches below the surface. We ship them knocked down.

Prices DO NOT include sash (for prices of sash, see opposite column).

No. E.—For 2 3 x 6 ft. sash.... \$17.00 No. F.—For 3 3 x 6 ft. sash.... \$20.00
No. G.—For 4 3 x 6 ft. sash.... 23.00 No. H.—For 5 3 x 6 ft. sash.... 26.00

HENDERSON'S "HALF-WIDTH" HOT BEDS AND COLD FRAMES.

These "Half-Width" frames (34 inches wide) are made of the same lumber etc., and painted just the same as the full sized frames described above, excepting that they are 12 inches above ground at the back which gives the same pitch to 3 x 3 foot sash as a 16 inch back does to full 6 foot length sash. Our frames are all shipped "knocked down" but they are quickly and easily put together by any one.

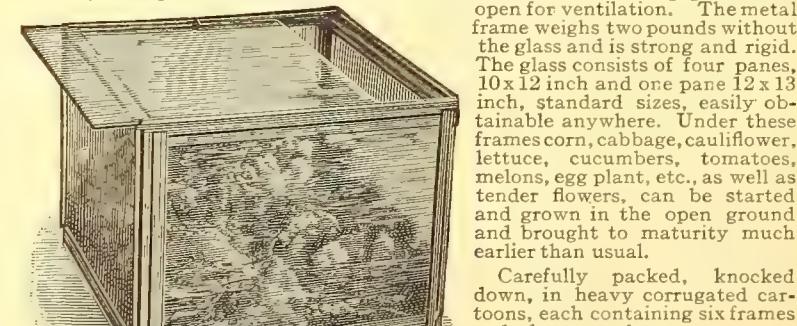
Prices do not include sash. (For prices of "Half-Length" sash see opposite column.)

"Half-Width" Frame for one sash, \$4.50; for two sash \$6.50; for three sash, \$8.00; for four sash \$9.50; for five sash \$11.00; for six sash, \$12.50.

"Half-Width" Cold Pits for one sash, \$8.00; for two sash, \$11.00; for three sash, \$14.00; for four sash, \$17.00; for five sash, \$20.00; for six sash, \$23.00.

THE BARRIE FORCING FRAME.

Constructed of tinned iron, protected from rust by a special paint; can be instantly set up or taken apart without the use of tools. The top glass slides open for ventilation. The metal frame weighs two pounds without the glass and is strong and rigid. The glass consists of four panes, 10 x 12 inch and one pane 12 x 13 inch, standard sizes, easily obtainable anywhere. Under these frames corn, cabbage, cauliflower, lettuce, cucumbers, tomatoes, melons, egg plant, etc., as well as tender flowers, can be started and grown in the open ground and brought to maturity much earlier than usual.



Carefully packed, knocked down, in heavy corrugated cartons, each containing six frames and glass complete.

Price, \$7.50 per six.

The standard boxes of glass contain 150 panes of the 6 x 8 in.; 90 panes of the 8 x 10 in.; and 60 panes of the 10 x 12 in.; either single or double thick glass.

Henderson's Hot Bed and Cold Frame Mats.

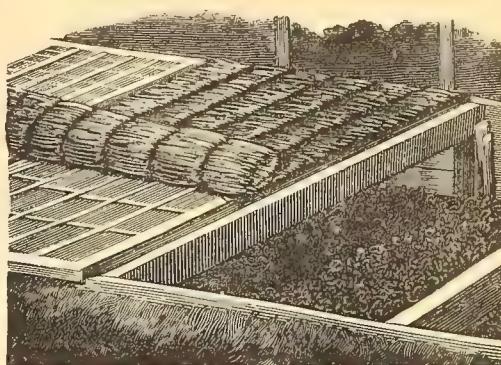
To Protect Plants from Frost in Winter and Spring.



These are made of Burlap, warmly lined with waste wool and cotton which is quilted in to hold position. A trial for two winters, proved they do not harbor mice or other vermin.

Prices

Size A, 40x76 inches, \$1.60 each; \$18.00 per dozen.
Size B, 76x76 inches, \$3.00 each; \$33.00 per dozen.

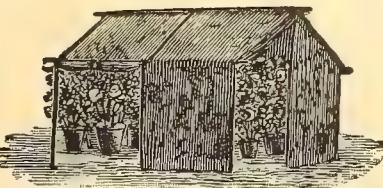


PATENT PROTECTING CLOTH.

Prepared to prevent mildewing and rotting; valuable for protecting plants from frost, covering hot-beds and frames in spring in lieu of glass, for Chrysanthemum houses. One yard wide.

PRICES.

Heavy Grade, per piece of 50 yards, \$9.00
Medium Grade, per piece of 50 yards, \$7.00



Twemlow's Old English Glazing Putty.

A semi-liquid putty that we find superior to any other of similar character for glazing greenhouse and hotbed sash. We use it with a Scollay's Rubber Putty Bulb, and if the putty is too thick at times, we thin it with a little boiled linseed oil. When so thinned it can be brushed into any crack or leak, making a solid filling. For bedding glass in, for filling cracks or seams in roof joints and frames it is splendid, being impervious to moisture and when set on dry wood it

does not heave and will not crack nor peel. 1 gallon glazes about 300 lineal feet. Price, 1 quart, 55c.; gallon, \$1.75.

Rubber Putty Bulbs for applying, \$1.00; P.P. 1 lb.

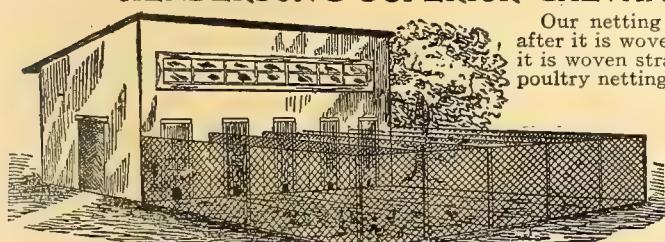
GALVANIZED WIRE GARDEN TRELLIS.



FOR
PEAS,
TOMATOES,
VINES,
ETC.

A Great Improvement in Garden Trellis, indispensable in every well-kept garden, easily put up, more tidy than brush, practically indestructible. Can be rolled up, stored away and used again year after year. Tomatoes grown on this Trellis are clean, ripen more evenly, and are less liable to rot. Cucumbers and other vines can be advantageously trained on the Trellis, economizing space and insuring cleaner and better matured fruits. This Trellis 48 inches wide is made of the best galvanized wire, 2-inch mesh, and is furnished in 10-foot lengths, with a 5½ foot stake at each end and one in the centre. Price, per 10 foot length, \$1.00; per doz. lengths, \$11.00.

HENDERSON'S SUPERIOR GALVANIZED WIRE NETTING, For Poultry Yards, Fencing, Garden Borders Etc.



Our netting is made of high tempered steel wire of maximum strength; it is heavily galvanized with zinc, after it is woven, which renders it "good for 100 years," and unites the wire together; the meshes are regular; it is woven straight and does not bulge. Warranted full measure. No. 19 wire, 2 inch mesh, is the popular poultry netting, though we can supply a heavier grade of wire at an extra cost, if specially wanted.

We do not sell LESS THAN ROLLS 150 FEET LONG.

We can supply ¾, 1, 1¼, 1½ and 2-inch mesh in all widths from 12 to 72 inches in either No. 19 or No. 20 wire.

On account of the fluctuations in price of wire netting caused by existing conditions in the metal trade, we cannot print firm prices for the season, but will be pleased to quote on application.

"Best Steel" Combined Wire Pliers and Cutters.

6 in., 60c., P. P., 1 lb.; 8 in., 80c., P. P., 1 lb.; 10 in., \$1.00, P. P. 2 lb.

PERFECTION GLAZING POINTS.

The finest glazing points on the market; the glass cannot slip; they are quick and easily put in with special pincers or may be driven in; no "rights and lefts" to bother with.

The points being beveled on top will hug close to glass when driven.

Price, per box of 1,000, 65c., P. P. 1 lb.; pincers, price per pair, 60c., P. P. 1 lb.

DIAMOND GLASS CUTTER

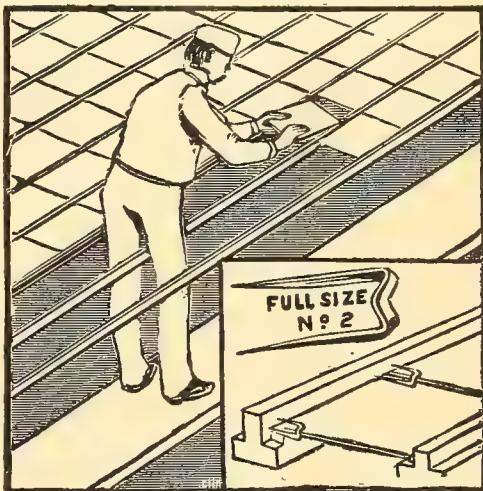
A diamond in one corner and a wheel in the other, thus giving a sure cut. Will never lose the point.

Price, \$4.00.

CHEAP GLAZING TOOL

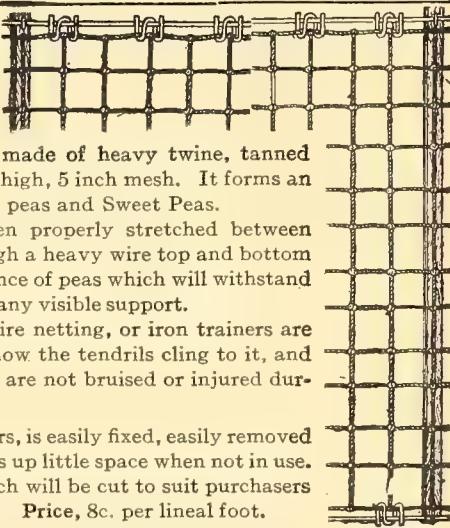
For the price this is a very satisfactory little implement—cuts with a little steel wheel.

Price, 10c. each, \$1.00 per doz.; postage 2c. each extra.



PERFECTION GLAZING POINTS.

"SIMPLICITAS" PEA NETTING.



"Simplicitas" Pea Netting is made of heavy twine, tanned and rot proof. It is made 4½ ft. high, 5 inch mesh. It forms an ideal support for climbing garden peas and Sweet Peas.

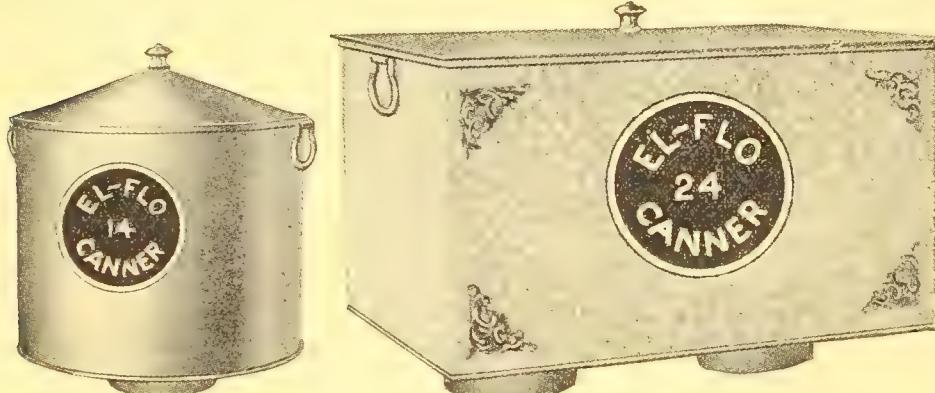
A single row of netting, when properly stretched between posts, is all that is required, though a heavy wire top and bottom is an advantage thus forming a fence of peas which will withstand the season's storms and not show any visible support.

The advantages over sticks, wire netting, or iron trainers are innumerable. It is remarkable how the tendrils cling to it, and being soft, the flowers and leaves are not bruised or injured during severe weather.

It is cheap, lasts for several years, is easily fixed, easily removed at the end of the season; and takes up little space when not in use. It comes in 300 foot lengths, which will be cut to suit purchasers into lengths not less than 25 feet. Price, 8c. per lineal foot.

“EL-FLO” CANNERS AND CANNING OUTFITS.

Kitchen and Outdoor Canners for the Home, Trucker, Hotel, College, Hospital and Commercial Purposes.



“EL-FLO” KITCHEN CANNERS.

“El-Flo” Kitchen Canners and Outdoor Canners.

KITCHEN CANNERS are made to be used on the kitchen stove or range burning either coal or wood. As they are light in weight and convenient to handle they are easily moved from the stove when not in use and where but a few cans or glass jars of either fruits or vegetables are to be “put up” every few days as the over production from the garden becomes ready. These kitchen canners are just the thing enabling the thrifty housekeeper to preserve for winter use, delicious eatables that otherwise would go to waste and with but little trouble and no expense other than for the cans or jars.

EL-FLO OUTDOOR CANNERS. Have advantages over the kitchen canners. They can be placed any where out of doors and do not interfere with kitchen operations. They are complete in themselves with boiler, fire box and pipe and can be set on any floor, wood, brick, cement or on the ground. No furnace to build—they are perfectly safe. Even the ash box being enclosed in a water jacket. They burn any kind of fuel and quickly generate and maintain the most intensive heat so that more canning can be accomplished than with kitchen canners where the heat is not so confined.

The art of canning or preserving in one form or another is almost as old as history itself. The Chinese possessed the secret long before the era of civilization—but “the reason why” has only been recently generally understood. It is *complete sterilization* which destroys all bacteria and molds, yeasts, germs—or minute forms of life that teem in the air we breath, the water we drink and all uncooked fruits and vegetables that we eat. These are the sole causes of decomposition or rotting. “Canning” therefore is destroying the bacteria, etc., by heat and sterilizing the air content of the can or jar and hermetically sealing to prevent the ingress of outside air with its accompanying destructive hosts. Where this is thoroughly done canned goods will last indefinitely. Household canning has been considered more or less of a bug-a-boo by most housewives many of whom seem to think that canning and preserving is a special gift possessed by a fortunate few, whereas any one may do it successfully by understanding the simple fundamentals. Forty percent of the orchard and garden products of

the U. S. go to waste every year, for the lack of facilities and a better understanding of domestic canning—this waste could be converted into appetizing, healthful, nutritious food from your own garden or farm. Simply equip yourself with an “El-Flo” canning outfit of a size suited to your needs, follow the directions given in the Instruction Book given with each—and solve the problem of the high cost of living. “El-Flo” canners are the best made, being scientifically constructed, durable, simple and convenient. They generate a high degree of heat quickly and maintain it uniformly, so that higher grade products are turned out—than by the slow sizzling process of canning by ordinary kitchen methods. With an “El-Flo” canner you can quickly “put up” a few cans a day—as the vegetables and fruits become ready—or they may be operated to their full capacity as circumstances may require and if desired quite a little money may be made by disposing of the output.

Among the vegetables and fruits preserved or “canned” either in tin or glass as preferred we mention apples, apricots, asparagus, beans, beets, berries, cherries, corn, grapes, peas, peaches, pears, plums, pumpkin, quince, rhubarb, spinach, squash, succotash, tomatoes, etc. and also meats.

“EL-FLO” KITCHEN AND OUTDOOR CANNERS.

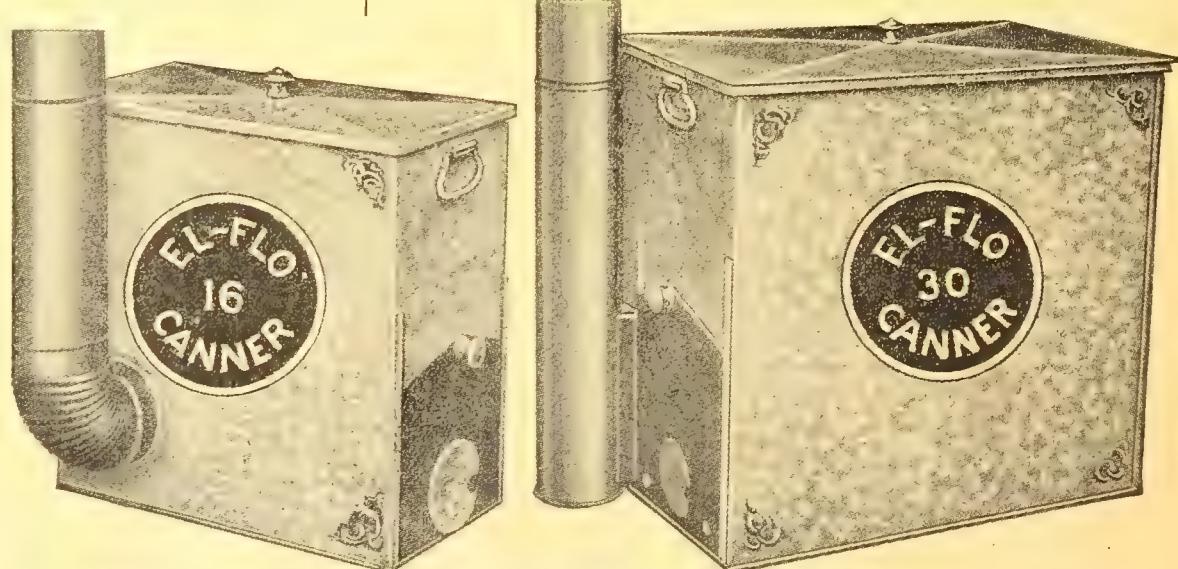
Descriptions, Capacities and Prices of Various Sizes.

“EL-FLO” No. 14—ONE HOLE KITCHEN CANNER. This is the smallest canner we make and it is very efficient and convenient where but a few cans or glass jars of vegetables or fruits are to be “put up” every few days. The water pocket fits in the hole of any stove or range, it holds 14 No. 3 cans or 7 quart jars. Caring for about $\frac{3}{4}$ bushel of the average vegetables or fruit at one time. The outfit consists of round boiler 14 in. in diam. by 12 in. high with cover, combination tray, tipping copper, can tongs, tray lifters, flux cord, can filler and book of instructions. Price, complete, \$3.50.

“EL-FLO” No. 24—TWO HOLE KITCHEN CANNER. A larger capacity canner than the above having two water pockets that fit in two holes of any stove or range. Where canning is to be done in the kitchen, this will be found a most satisfactory size—being light in weight and easily moved about. It holds 24 No. 3 cans or 12 quart glass jars. Caring for about $1\frac{1}{2}$ bushels of the average vegetables or fruits at one time. The outfit consists of boiler 19 inches long by 14 in. wide, by 12 in. high with cover. 2 combination trays, tipping copper, can tongs, tray lifters, flux cord, can filler and book of instructions. Price, complete \$5.00.

“EL-FLO” NO. 16—SMALL FAMILY OUTDOOR CANNER. Very light, portable and convenient. Most efficient for canning either in tins or glass. It will take care of quite a large quantity of fruits and vegetables during the season if kept busy as it holds at each filling 16 No. 3 cans or 8 quart glass jars. Caring for about $\frac{3}{4}$ bushel of the average vegetables or fruits at one time. The outfit consists of boiler 18 in. long by 10 inches wide by 18 in. high with cover, combination tray, capping steel, tipping copper, can tongs, tray lifters, two joints pipe and elbow, can filler, flux cord and book of instructions. Price, complete, \$7.50.

“EL-FLO” NO. 30—LARGE FAMILY OUTDOOR CANNER. The most convenient general family size and very efficient. It holds the world’s record for the most economical pack and is largely used by the U. S. government demonstrators, many truckers and hundreds of private families. It has no superior nor even an equal for its size any where. Every modern convenience is embodied in this outfit. The contents of each can or jar are processed uniformly and just right and will remain so indefinitely. It holds 30 No. 3 cans or 15 quart glass jars at each filling. Caring for about $1\frac{1}{2}$ bushels of the average vegetables or fruits at a time. The outfit comprises boiler 23 in. long by 14 in. wide by 23 inches high, cover, capping steel, tipping copper, two combination trays, tray lifters, can tongs, can filler, flux cord, two joints pipe and book of instructions. Price, complete, \$12.50.



“EL-FLO” OUTDOOR FAMILY CANNERS.

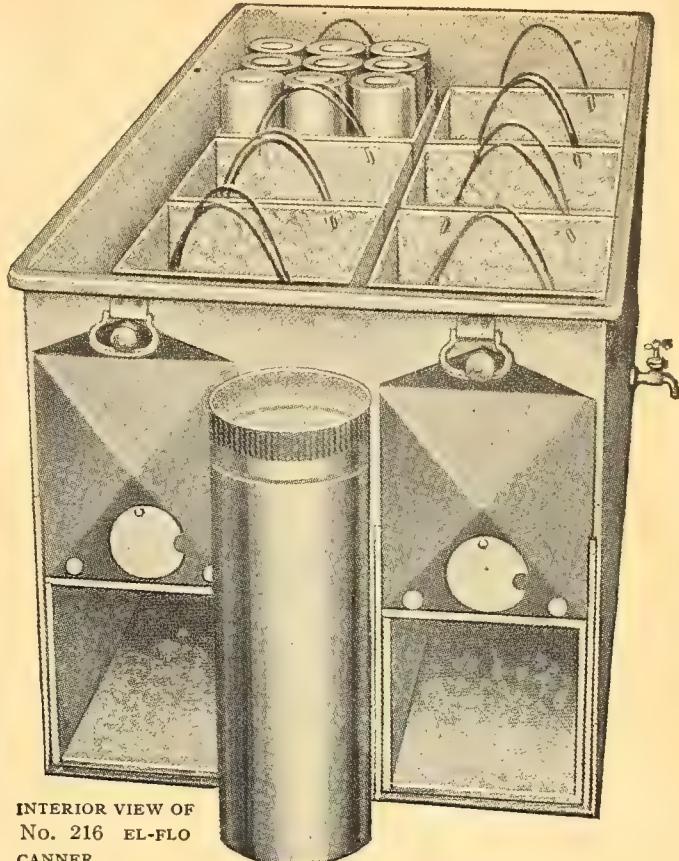
NOTE: THE PRICES OF CANNERS ARE SUBJECT TO ADVANCE WITHOUT NOTICE.

EL-FLO NO. 64. HOTEL AND COLLEGE SIZE OUTDOOR CANNER. A large roomy, well proportioned canner and operated very economically. Its size is adapted to the requirements of hotels, colleges, hospitals, truckers as well as those who can for commercial purposes and those who "take in" canning. It holds at each filling 64 No. 3 cans or 32 glass quart jars. Caring for about 3 bushels of the average vegetables or fruits at a time. The outfit consists of boiler 38 in. long x 18 in. wide x 23 in. high, and cover; capping steel, tipping copper, 4 combination trays, tray lifters, can tongs, can filler, flux cord, faucet, 2 joints and pipe elbow and book of instructions. Price complete, \$22.50.



EL-FLO NO. 100. COMMERCIAL AND TRUCKERS OUTDOOR CANNER. A portable canner for canning on a comparatively large scale, for either "community" canning or commercial purposes by truckers and others. It is built so that it may be operated in units of one, two, three or all as desired. No. \$250.00 canner can do more or better canning than may be accomplished with this. No crane nor cumbersome equipment. The trays are conveniently handled by one person. Several of these No. 100 outfits are "putting up" 100,000 cans each annually. It holds at each filling 100 No. 3 cans or 50 quart glass jars, caring for about 5 bushels of the average vegetable or fruits at a time. The outfit consists of boiler 48 in. long x 22 in. wide x 24 in. high x 24 in. and cover pipe, 2 capping steels, 2 tipping coppers, 5 combination trays, tray lifters, flux cord, can filler and book of instructions. Price complete, \$35.00.

EL-FLO NO. 216.—LARGE COMMERCIAL AND TRUCKERS OUTDOOR CANNER. Our largest portable outdoor canner and adapted for a large output though may be profitably operated in units. It was especially designed for co-operative factory canning—but it is also extensively used by truckers farmers and fruit growers, for handling their surpluses of vegetables and fruits. The outfit is complete and the equal of any \$500.00 factory plant in efficiency and results. Its operation is simple and economical requiring no expert help. There are 8 trays each holding 27 No. 3 cans at one filling and



INTERIOR VIEW OF
No. 216 EL-FLO
CANNER.

are handled easily by the operator without the use of a crane. The two fire boxes are completely surrounded by water which is heated rapidly and most economically. The high degree of heat produced is maintained so the contents of cans or jars are not subject to a slow soaking process. Sterilization begins immediately and is most thorough. The full capacity at one filling is 432 No. 3 cans or 216 quart glass jars. Caring for about 20 bushels of the average vegetables or fruits at a time. The outfit consists of boiler 55 in. long x 28 in. wide x 27 in. high with cover. Two fire boxes each 13 x 13 x 12 in.; faucet 4 joints, 8 in., smoke stack and elbow, 3 capping steels, 1 continuous heating capping steel 3 tipping coppers, 1 gasoline fire-pot, 3 pair can tongs and book of instructions. Price, complete \$75.00.

"EL-FLO" Canners.	Dimensions			Weight Canner and Outfit	Holds		Quantity Vegetables, etc. each fill- ing (about)	Capacity Daily of No. 3 cans	Price with outfit.
	length	width	height		quart glass jars	No. 3 tin cans			
No. 14. One-hole kitchen canner...	14 in.	14 in.	12 in.	15 lb.	7	14	2 bu.	80 to 150	\$ 3.50
No. 24. Two-hole kitchen canner...	19 "	14 "	12 "	20 "	12	24	1 1/2 "	125 to 200	5.00
No. 16. Small family outdoor canner	18 "	10 "	18 "	28 "	8	16	3/4 "	275 to 350	7.50
No. 30. Large family outdoor canner	23 "	14 "	23 "	55 "	15	30	1 1/2 "	400 to 600	12.50
No. 64. Hotel and College canner...	38 "	18 "	23 "	90 "	32	64	3 "	1000 to 1400	22.50
No. 100. Commercial and Truckers canner.....	48 "	22 "	24 "	125 "	50	100	5 "	1600 to 2200	35.00
No. 216. Large commercial and truckers canner.....	55 "	28 "	27 "	300 "	216	432	21 "	3500 to 5000	75.00

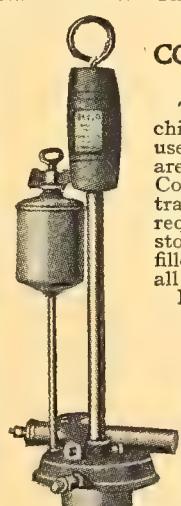
AN AVERAGE ESTIMATE PER BUSHEL.—One bushel of either tomatoes, apples, peaches, pears, plums, beans, peas, corn, berries, potatoes, okra, squashes, etc., fill 18 to 24 No. 3 cans, or 28 to 36 No. 2 cans. No. 3 cans are the standard size. The capacity of our Outfits are made on this average size can. Five bushels of the average fruits and vegetables will fill 100 No. 3 cans.

EL FLO CONTINUOUS HEATING CAPPING STEEL.

The solution to sealing problems. To the defective sealing by improperly heated tools is attributed the greater per cent. of loss in canned goods—thus the ever-ready, evenly heated capping steel will insure you against chance. Five cents worth of gasoline will run the EL FLO heater a whole day—sealing more than 1,000 cans—limited only by the speed of the operator. A blue flame plays continuously on the steel, keeping a nice uniform heat the whole day through. It is light, neatly finished, compact, convenient, and never requires any "tinning" or "fluxing." Perfectly safe, and is as simple and easily operated as a lamp. No experience whatever is needed to do perfect and rapid sealing from the beginning. Three styles and made in all sizes. The heat is applied on either side, top or interior of steel. EL FLO Continuous Heater, with capping steel "tinned," key and pump, any size \$3.90. Extra capping steels, best quality and highly finished \$1.25.



FAVORITE JELLY STRAINER
HOLDER.



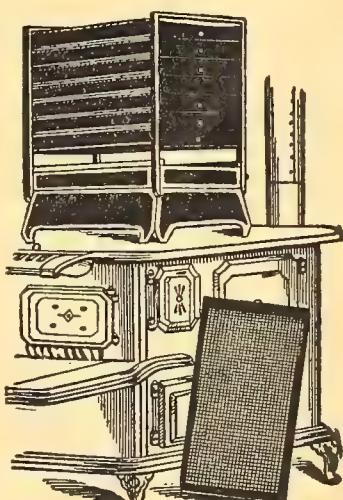
EL FLO CAPPING
STEEL
Continuous heating

COOK-STOVE FRUIT DRYER OR EVAPORATOR.

This is the latest, cheapest and best machine of its kind on the market. It can be used on any kind of stove. Its dimensions are: base, 22 x 16 inches; height, 26 inches. Containing eight galvanized wire-cloth trays. Weight, 25 lbs. No extra fire is required. It is easily set off and on the stove, as needed, whether empty or filled with fruit. With it you can evaporate all kinds of fruits, berries, and vegetables. Price, \$6.00.

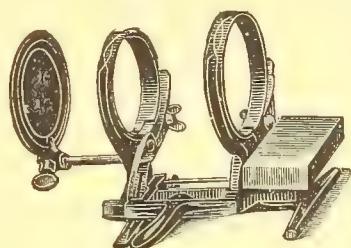
THE FAVORITE JELLY STRAINER HOLDER.

This strainer holder is appreciated by every house keeper who makes jelly or uses a strainer for any purpose. The cloth can easily be removed for cleaning and the rings and rod are plated to prevent rust and tarnishing, standard jointed so that it may be packed away in small space. Price in pasteboard box complete with bag \$1.00. (Mail weight 1 lb.)



COOK-STOVE FRUIT DRYER.

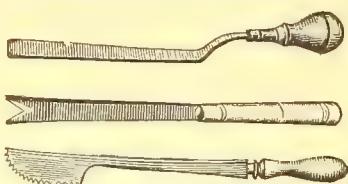
WATT'S ASPARAGUS BUNCHER.



The Best Buncher Made.

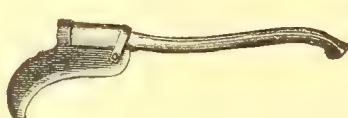
May be adjusted by simply loosening the bolts at either end and pulling out the arms to fit; thus both ends of asparagus can be bunched properly. As the asparagus grows larger at one end than the other this will be found at a great advantage, as both ends can be regulated. Price, 1 lb. size, \$3.25; 2 lb. size, \$3.25. P. P. 10 lbs.

ASPARAGUS KNIVES.



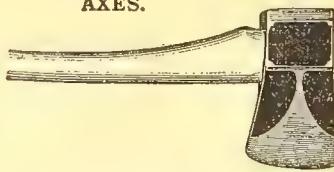
American straight edge, each, 40c.; American V-shaped knife, small, each, 40c.; large, 50c. English, saw-tooth edge, each \$1.75. P. P. 1 lb.

BRUSH AXE.



This is an excellent tool for trimming out underbrush, cutting down old berry hedges, etc. Price, handled, \$1.25.

AXES.

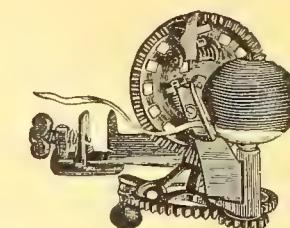


Best quality, handled. Light, 2½ lbs., \$1.10; medium, 3 lbs. \$1.35; heavy, 3½ lbs., \$1.60. Boy's Axe, \$1.00.

BEET TOPPING KNIFE.

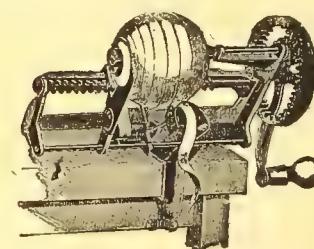


Especially made for rapidly and easily cutting off the tops of beets, mangels, rutabagas, etc., Price, 65c., P. P. 1 lb.



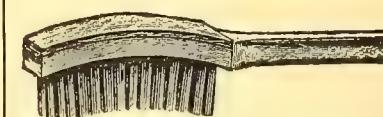
"TURN TABLE" APPLE PARER.

With push-off so arranged that parings and juice cannot fall upon it; pares close to the fork and does good work. P. P. 4 lb. Price, 85c.



Apple Parer, Corer and Slicer.

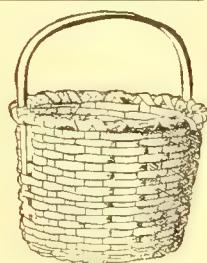
The parings and juice fall clear of the working parts; strong, durable and does good work; it can be used to pare only without coring and slicing, if desired. Price, \$1.75 P. P. 4 lb.



STEEL WIRE TREE BRUSH.

No. 160. For large trees.....\$1.75
" 161. Fastens to pole for large trees.....2.00
" 162. For branches and young trees.....1.75

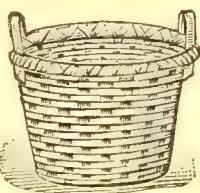
HANDLED BASKETS.



Best oak splint, stiff bail round rim.

1 bushel, 70c

FARMER'S BASKETS.

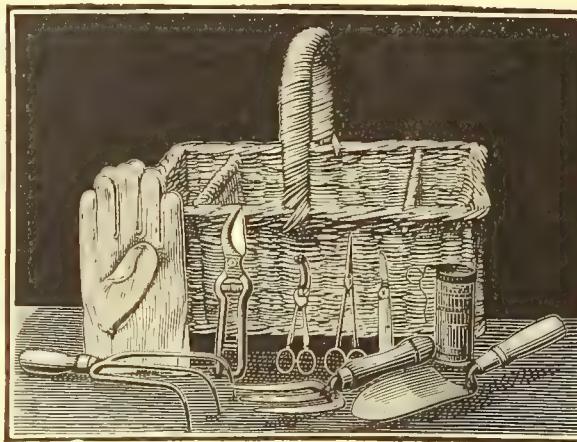


Best Oak Splint. Hand made. Each.

Bushel...90c.
1½ bush., \$1.35

2 " 1.60

3 " 2.50



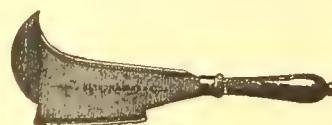
Price, complete.....\$14.00
Basket only.....4.00
Flower Picking Basket, to stick in the ground.....4.00

HENDERSON'S GARDEN BASKET.

This basket is made of white willow with 3 compartments and fills along felt want for the amateur gardener. We fit these baskets with 1 pair Goat Skin gardeners' gloves, 1 pair 8½ Leader Pruning Shear, 1 English weeding fork, 1 Eureka weeder, 1 6-in. solid steel trowel, 1 budding knife, 1 pair trimming scissors, 1 pair flower gathering scissors, 1 ball twine.

No. 160. For large trees.....\$1.75
" 161. Fastens to pole for large trees.....2.00
" 162. For branches and young trees.....1.75

ENGLISH BILL HOOK.



Very handy for trimming shrubbery hedges, etc., where a long-handled hook cannot be used. Price, \$1.85.



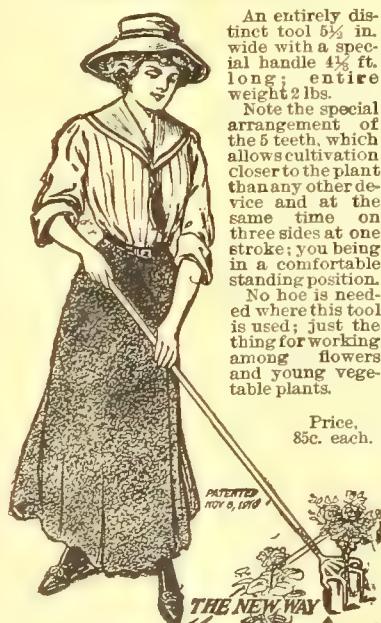
Made to order, with any name or initial for marking tools and implements. ¼, ½ and ¾ inch letters.

Price, with 6 letters or less, \$2.00. Additional letters, each, 35c.



MEHLER'S Handy Cultivator and Weeder.

Works with ease—Saves the knees.



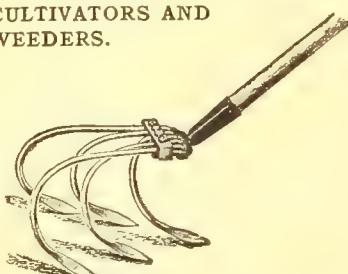
An entirely distinct tool 5½ in. wide with a special handle 4½ ft. long; entire weight 2 lbs.

Note the special arrangement of the 5 teeth, which allows cultivation closer to the plant than any other device and at the same time on three sides at one stroke; you being in a comfortable standing position.

No hoe is needed where this tool is used; just the thing for working among flowers and young vegetable plants.

Price, 85c. each.

THE NORCROSS LONG HANDLED CULTIVATORS AND WEEDERS.



Most useful of hand Garden Tools. It will pull out weeds, pulverize the ground thoroughly, leaving it level.

It will work between rows or the centre shovel can be removed and the row straddled if desired.

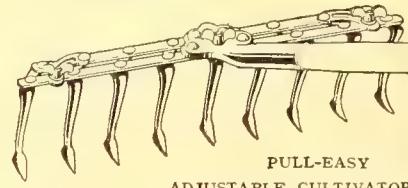
It is adjustable in width by sliding the top plate.

It is light, weighing but three pounds including long handle.

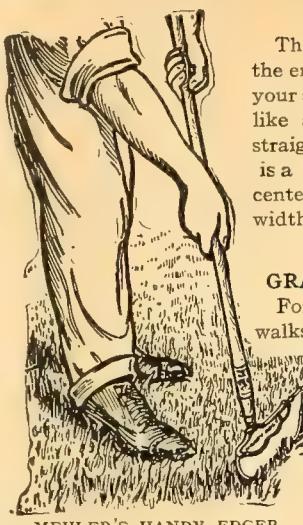
Price, 3 prong, 65c.; 5 prong, 95c.

THE "PULL-EASY" CULTIVATOR.

This new garden tool is ideal for cultivating, stirring and pulverizing the soil between rowed crops; the teeth of cold pressed steel are unbreakable and are shaped and pitched just right to penetrate the ground without down pressure and pull easily. The frame is hinged in the middle so it can be adjusted—opened or closed, adapting the tool to different widths of rows between 7 and 18 inches, or the center tooth may be removed allowing the cultivator to "straddle" the row, i.e. work both sides of one row. The handle of tough smooth white ash is 4½ feet long so that stooping is not necessary. Winged thumb nuts on the bolts facilitates the adjustments. Cultivating the garden with the "Pull-Easy" is a pleasure. Price, \$1.25.



PULL-EASY
ADJUSTABLE CULTIVATOR

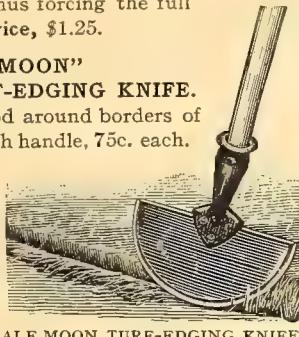


MEHLER'S HANDY EDGER.

The handle at one side gives full view of the work the entire width of the edger and the handle being at your side, permits the edger to be drawn with a knife-like action instead of chopping, thus insuring a straight line. Where foot pressure is applied, there is a $\frac{1}{8}$ of in. surface directly over the center of the tool, thus forcing the full width of the tool. Price, \$1.25.

"HALF MOON" GRASS AND TURF-EDGING KNIFE.

For trimming the sod around borders of walks, etc. Price, with handle, 75c. each.

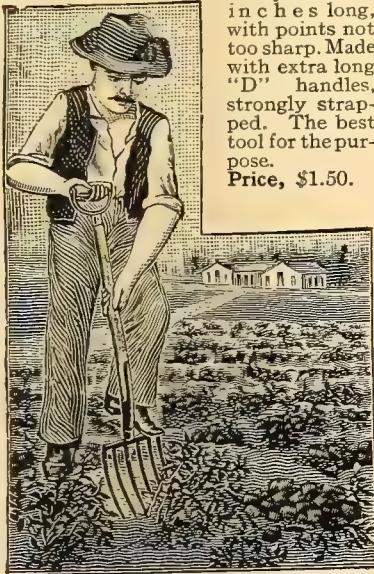


HALF MOON TURF-EDGING KNIFE.

MEHLER'S HANDY EDGER.

HENDERSON'S POTATO DIGGING FORK.

Expressly made for digging potatoes and root crops. It has 6 round, heavy tines, 10 inches long, with points not too sharp. Made with extra long "D" handles, strongly strapped. The best tool for the purpose. Price, \$1.50.



MANURE FORKS.

Best quality, strapped handles. D-handle.

4 tine.....	\$1.25	Long handle	\$1.25
5 ".....	1.40	" "	1.40
6 ".....	1.75	" "	1.75



VEGETABLE SCOOP FORKS.

Made especially for handling beets, potatoes, apples, corn, etc.

Broad oval tines, flattened at the tips; will not stick, cut or bruise, yet loads to the head. 8 tine, \$2.00. 10 tine, \$2.25.

The handiest tool for the purpose \$1.25

STONE PICKING FORKS.

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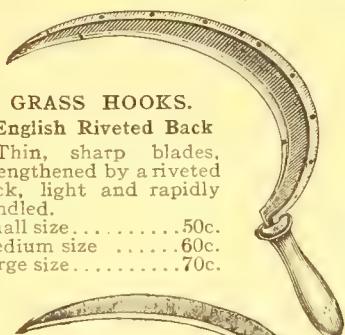
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The handiest tool for the purpose \$1.25

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The handiest tool for the purpose \$1.25

STONE PICKING FORKS.



GRASS HOOKS.

English Riveted Back

Thin, sharp blades, strengthened by a riveted back, light and rapidly handled.
Small size.....50c.
Medium size.....60c.
Large size.....70c.

Knuckle Saver Grass Hook.

The handle is raised from the blade, making it possible to cut close without bruising or skinning the knuckles. Price, 60c.

Popular Grass Hook.

A good low price hook.
Full size, 35c.



GARDENER'S GLOVES.

For protecting the hands, handling thorny plants, etc. Heavy goat, per pair, (P. P. 1 lb.).....\$1.75

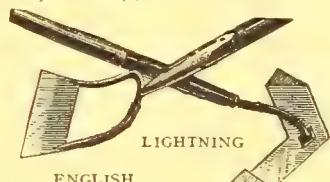
RUBBER GARDENING GLOVES.

With gauntlets, P. P. 1 lb.
Men's sizes, \$2.00; Ladies' size, \$1.75.

IMPORTED ENGLISH SCUFFLE HOES.

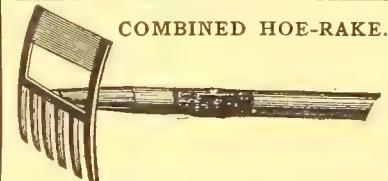
(Handles extra, 15c. each.)

5-inch, 65c.; 6-inch, 70c.; 7-inch, 75c.; 8-inch, 80c.; 9-inch, 90c.; 10-inch, \$1.00; 12-inch, \$1.20.

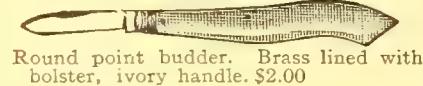


LIGHTNING SCUFFLE HOE.

The V-shaped blade pushes through the soil easily, and cuts front and back; the sides turn up to prevent cutting off plants.
8-inch cut, handled, \$1.15.



A convenient tool for garden weeding and cultivating, solid steel 4-tooth, 4½-inch, blade, 65c.; 6-tooth, 6½-inch blade, 80c.



A Round point budger. Brass lined with bolster, ivory handle. \$2.00



B Straight blade budger. Brass lined with bolster, ivory handle, \$2.00.



C Straight blade long handled budger, brass lined with bolster. Ivory handle, \$2.25.



HATCHETS.

Axe Pattern, for pruning, hunters' use, etc. No. 1, 1½ lb., 65c.; No. 2, 1¾ lb., 75c.; No. 3, 2 lb., 85c.

Shingling Hatchet, 50c. Barrel, or Half Hatchet, 85c. Claw Hatchet, 85c.

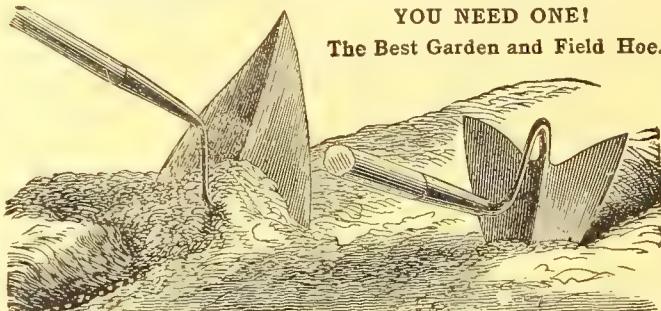
"RAPID-EASY" SCUFFLE HOE AND WEEDEER.

Works very easily through the ground just below the surface loosening and pulverizing the soil cutting off all weeds by a push and pull motion both edges of the zig zag blade being cutters.
85c. each.

WARREN, or HEART-SHAPED HOE.

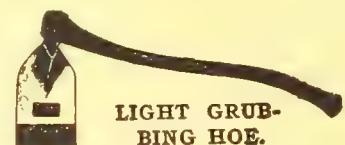
YOU NEED ONE!

The Best Garden and Field Hoe.



The Warren Hoes are unequaled for hoeing, weeding, cultivating, making drills, covering seed, etc. Scour sharp, right hang, light to handle.

Prices: Small, 80c.; medium, 90c.; large, \$1.00.



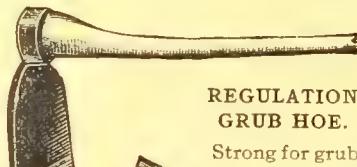
LIGHT GRUB-BING HOE.

Just the thing for bog work, drains and innumerable purposes on a farm; solid steel, strong, beveled edge.
5½ inch blade, \$1.00; 6-inch, \$1.25
8-inch.....\$1.50



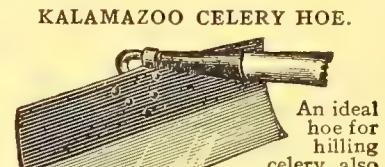
ACME WEEDING HOES.

Very popular hoes with florists and gardener's; for drilling, cultivating and weeding.
Acme Double Prong, 4½-in. blade, 70c.
Acme Single Prong, 6-in. blade, 60c.



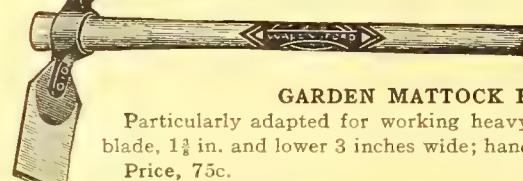
REGULATION GRUB HOE.

Strong for grubbing out roots, clay, ditches, etc. about, 4-lb. \$1.00



KALAMAZOO CELERY HOE.

An ideal hoe for hillling celery, also for cleaning ditches and as a stable hoe slightly concave blade, 14½ inches wide, \$1.35.



GARDEN MATTOCK HOE.

Particularly adapted for working heavy or hard soils; upper blade, 1½ in. and lower 3 inches wide; handle, 5 ft.

Price, 75c.

BUDDING AND PRUNING KNIVES.

(Parcel post weight 4 oz. ea. for Budding and 6 oz. for Pruning Knives.)



D Medium size point bladed pruner; stag handle, steel lined with bolster, \$1.35.



E Double bladed pruner, steel lined with bolster, \$2.00.



F Large hook bladed pruner, steel lined with bolster, \$2.00.

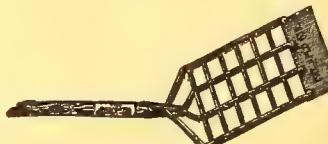
THE HILTON.
The Best Scuffle or Push Hoe.



This celebrated hoe is made of spring steel, shaped as shown in cut, with double edged blades so adjusted that it cuts and cultivates equally well when thrust forward or pulled back. These hoes are made in two widths—six and eight inches.

Price, 6-inch, 50c.; 8-inch, 65c.

THE CARPENTER PATENT SCUFFLE HOE AND PULVERIZER.



A combined scuffle hoe, pulverizer and shovel. Excellent for breaking up lumps of dirt, manure, etc. Has 6 foot handle. Price, 75c.

PRONG HOES, or POTATO AND MANURE HOOKS.



Indispensable for digging potatoes and other crops, forking over manure.
Four-round tine.....70c.
Five-round tine.....85c.
For broad flat tine.....90c.

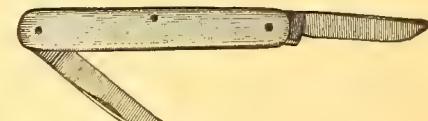
HENDERSON'S SUPERIOR DRAW HOES.



Extra quality cast steel, oil-tempered, thin, elastic, polished blade; Swan's neck socket shank, 5-inch. Ladies, 45c. and the following sizes. 6, 7, 7½ and 8-inch blades, 60c. each. dozen.....\$6.50



G "Wahrencliffe" three bladed stag handle, \$2.00.



X Double bladed budger, 1 straight and 1 round point blade; brass lined, ivory handle, \$2.00.

SIMPLEX
Waterproof Plant Labels.
The writing is protected by the transparent cover, and will last indefinitely if done with lead pencil.
No. 1—3 x $\frac{1}{2}$ inch 25c. per dozen, \$2.00 per hundred.
No. 2—4 x $\frac{1}{2}$ inch, 50c. per dozen, \$4.00 per hundred.
No. 3—5 x 1 inch, 75c. per dozen, \$6.00 per hundred.

LABEL PENCIL.
Black lead, just the thing for legible and permanent writing on wood labels.
Price, 5c. each, 50c. doz., P.P. 1 lb.

George Jules C. THE ALLPROOF

Chrysanthemum-Ornanda

"ALL PROOF LABELS."

A sheath of zinc with top and edges turned over forms a frame into which a glass face slides from the bottom and is held in place by lips of the zinc which turn under. The face of the label is enameled dead white on which the name is written with any lead pencil. The writing can be erased and re-written by unbending the lips and sliding the glass out. The best low priced permanent or weather proof label we know of.

Prices complete with glass fitted "All proof" suspending labels 3 $\frac{1}{2}$ in. long with galvanized wire hooks, \$1.00 per doz. (P.P. 10 oz.); \$7.50 per 100 (P.P. 5 lbs.).

"All proof" Pot labels 6 in. long, 90c. per doz. (P.P. 10 oz.); \$7.00 per 100. (P.P. 5 lbs.).

"All proof" Garden Labels 8 in. long \$1.00 per doz. (P.P. 14 oz.); \$7.50 per 100. (P.P. 7 lbs.).

PICK MATTOCK.
Pick Mattock, handled, \$1.35.

CLAY PICK.
Double pointed Clay Picks, handled light \$1.10., medium, \$1.30.

AXE MATTOCK
Long Cutter or Axe Mattock, fitted with handle, \$1.35.
Short Cutter Mattock, handled. \$1.35.

MEAT CHOPPER.

The meat is cut perfectly, not torn; adapted for making sausage, mince meat, hash, Hamburger Steak, croquettes, chicken and lobster salads, chopping peppers, cocoanuts, horseradish, meat for beef-tea, corn for fritters, etc.

Small size, 1 pound a minute, \$2.00; large size, 2 pounds a minute. Price, \$3.00.

PERMANENT LABEL HOLDER.

To stick in ground.

It is made with a 7 $\frac{1}{2}$ in. prong to thrust in the ground carrying an inclined removable 3x2 in. frame-holding name card and mica protector. It is just the thing for labeling shrubs, herbaceous plants, etc.

Price, 20c. each, \$2.00 per doz., P.P. 4 lbs.



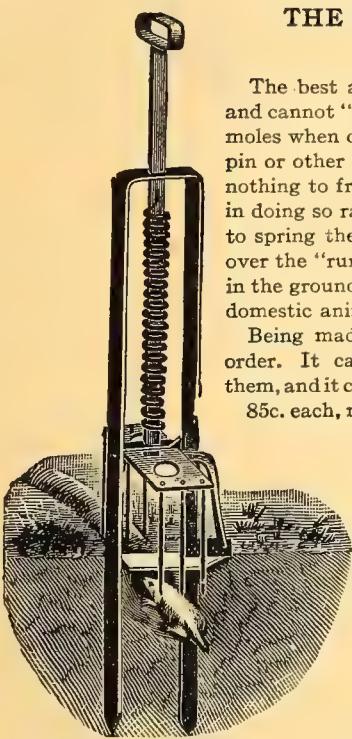
Glass Label Holder.—The best device for permanent labelling; absolutely air and water tight, the glass is annealed. Write the name on card, insert through opening at bottom of holder, and seal with putty or plaster Paris. Price, 60c. doz., P.P. 1 lb.; or \$4.50 per 100, buyer paying expressage.

THE PERFECTION MOLE TRAP.

The best and most complete Mole Trap, easy to set and cannot "startle" or injure the operator. It will catch moles when quite deep in the ground, and there being no pin or other obstruction projecting into the run, there is nothing to frighten or disturb the mole as it passes, and in doing so raises the ground over the "run" just enough to spring the trigger, which must firmly set on the soil over the "run." The points of the pins being constantly in the ground, it cannot catch or injure chickens or other domestic animals.

Being made of metal it cannot warp or get out of order. It can be set close to plants without injuring them, and it can also be set touching a wall, fence, etc.

85c. each, mail weight 5 lb.; \$9.00 per doz.



THE PERFECTION MOLE TRAP.

Henderson New Model Mole Trap.

10 $\frac{1}{2}$ inches high when set. The only trap that can be successfully used in hot beds. Anchor posts are notched, preventing trap springing from the ground when tripped. Self setting.

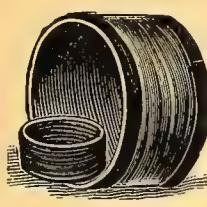
Price, \$1.50; mail weight 4 lb.



NEW MODEL MOLE TRAP.

WOODEN MEASURES.

$\frac{1}{2}$ bu. size, 75c.
Peck " 50c.
4 qt. " 40c.
2 qt. " 30c.
1 qt. " 20c.
Nest of above 5 sizes, \$2.00.



MAULE OR BEETLE.

Heavy and strong, with iron bands, for driving wedges, etc., \$3.00 each.



THE EUREKA LAWN MOWER SHARPENER.

A new device to attach to the stationary Bar of any mower. Sharpens all revolving blades to a keen, even, accurate edge in a few minutes. Anyone can attach it. No filing, no work. Simply push the mower on sidewalk with Sharpener attached and blades sharpen automatically.

Price, 35c. (P.P. 8 oz.). Specify width of mower whether 12 in., 14 in., 16 in., 18 in., or 20 in.



FRUIT, WINE AND JELLY PRESS.

Superior, simple, easily operated, saves all rehandling, as it extracts the juice and ejects the skins and seeds in one operation, it can be used for many purposes, including the making of wine, jellies, fruit butters from grapes, currants, quinces, pineapples, tomato catsup, etc.

Prices, Family size, capacity 1 qt., \$3.50; 3 qts., \$18.00.



Labels Wooden. Garden labels are put up in packages of 100; pot plant and tree labels in packages of 500.

Plain Painted

in. per 100 per 100

Garden 8 \$0.50 \$0.65 P.P. 2 lbs.

" 12 .70 1.00 P.P. 3 lbs.

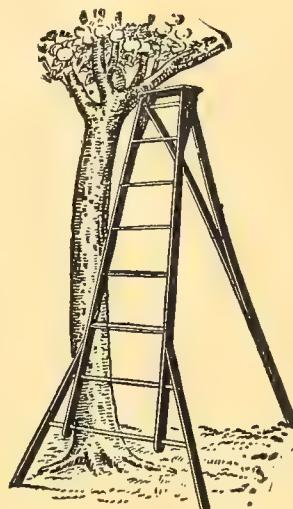
per 100 per 1000

Pot, 4 .80 \$1.00 P.P. 4 lbs.

" 5 1.10 1.35 P.P. 4 lbs.

" 6 1.35 1.60 P.P. 5 lbs.

Wired, 3 $\frac{1}{2}$ 1.60 1.90 P.P. 4 lbs.



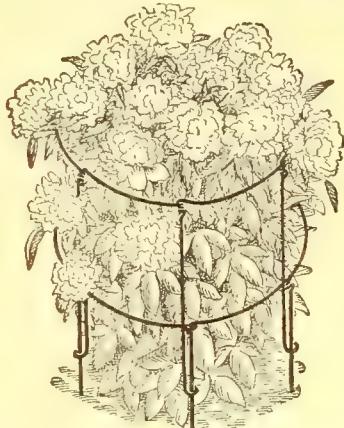
TRIPOD FRUIT-PICKING STEP LADDER.

A tripod step ladder, particularly adapted for picking fruit and for uneven ground. It is light, strong, rigid and broad based and "stands where other fall." Flat steps (except two lower rounds) easy to stand on, easy to move. Price, 5 ft., \$1.75; 6 ft., \$2.00; 7 ft., \$2.25 8 ft., \$2.50; 10 ft., \$3.00; 12 ft., \$3.50.

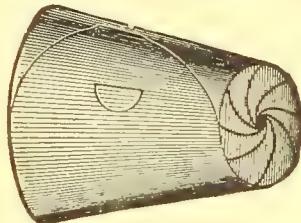
HENDERSON'S SPECIAL OIL FOR LAWN MOWERS, &c.

The very best lubricating oil for mowers and all small machine bearings. It has sufficient body to make things run easy and be lasting, without "gumming up." Price, half pint, in spring bottom can with oiler spout, 25c. each; \$2.50 doz., (P.P. weight 12 oz. ea.)



**EXTENSION PEONY SUPPORTS.**

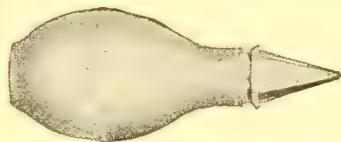
For supporting the outer flowers; heavy galvanized wire in sections so they may be taken apart for shipping and storing. Diameter 2½ ft.; height 2 ft. Price, 85c. ea., \$9.00 doz.

NEPONSET WATERPROOF PAPER FLOWER POTS.

Unbreakable, light economical. They last at least one season and their cost is trifling; they nest closely for shipping.

PRICES.

In.	Doz., P.P.	100 P.P.	1000
2½	10c., 3 oz.	50c., 2 lb.	\$4.00
3	12c., 5 oz.	70c., 2 lb.	6.00
3½	14c., 7 oz.	90c., 3 lb.	7.00
4	20c., 8 oz.	\$1.20, 4 lb.	8.00
5	25c., 13 oz.	1.50, 7 lb.	12.00
6	30c., 25 oz.	2.00 11 lb.	16.00

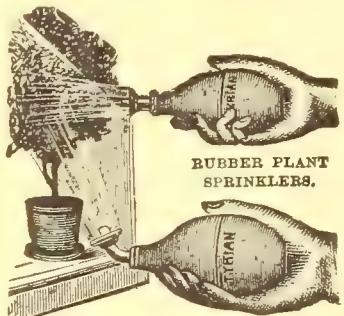
**RUBBER PUTTY BULB.**

The best for applying liquid putty and white lead when glazing and repairing sash and green houses.

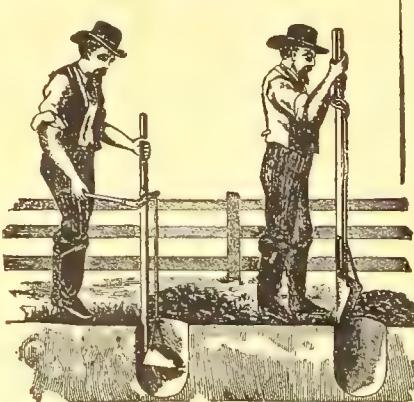
Price, \$1.00 (mail weight 1 lb.)

RUBBER SPRINKLERS.

For sprinkling cut flowers, seedlings, clothes, etc. A pressure on the bulb ejects the water in a fine spray.

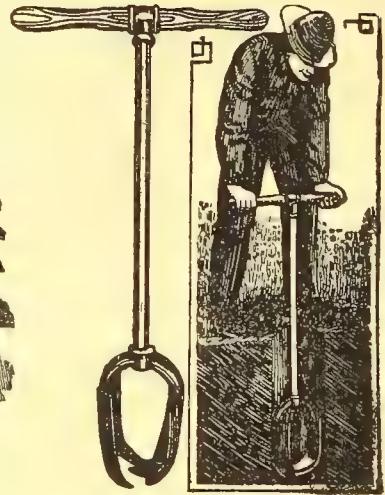


Prices, straightneck, 7 oz. size 85c.; 12 oz. size, 95c.
Angle neck, 7 oz. size 90c.; 12 oz. size, \$1.00. P.P. 1 lb.

**THE LOCK LEVER POST HOLE DIGGER.**

The "lock lever" is automatic and locks the blade at right angles so that both hands are used in lifting the loosened earth. It works successfully in all kinds of soil. Scours or cleans in mucky soil. Made of best tempered steel. Only one blade to keep sharpened. Makes a hole of any desired diameter. By the use of the compound lever operating blade ordinary stones that obstruct digging are readily loosened and removed.

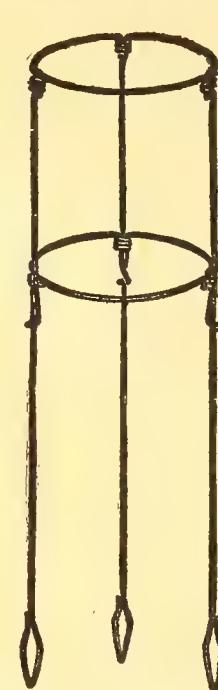
Price.....\$1.50 each

**THE "IWAN" POST HOLE DIGGER.**

Ease of operation and superior and rapid work are features of this new digger; 200 to 300 holes a day may be dug with it. After starting it but little pressure is required, simply turn in; it cuts down like an auger to any required depth through clay or soft ground, sod, roots or sand; it leaves a clean hole, no swaying of posts, cannot clog.

PRICES.

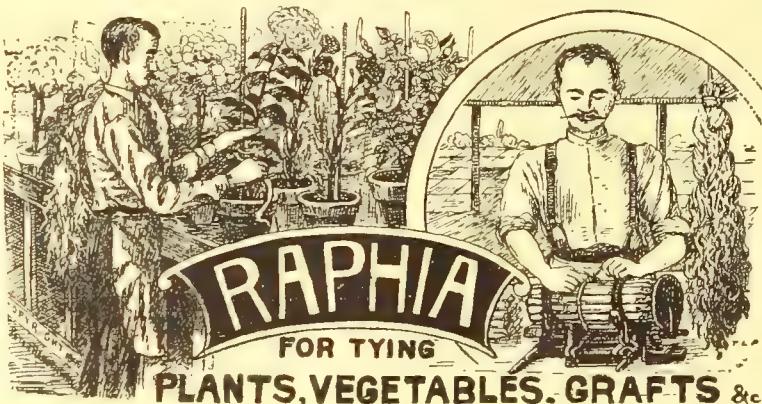
For 6 in. holes.....	\$2.25
" 8 " "	3.00
" 10 " "	3.25

**EXTENSION PLANT SUPPORT**

Especially adapted for Carnations and similar plants; the upper ring may be moved up or down as the size of the plants require. They are made of steel wire, well galvanized to prevent rusting. They are used by the leading growers, who praise them highly.

Prices	Per doz.	Per 100.	Per 1000.
2 ring support..	75c.	\$5.00	\$50.00
3 " "	90c.	6.00	55.00

2 ring support, P.P. 4 lb. doz.
3 " " P.P. 5 lb. doz.



Price (in braided plait, about one pound each) 30c. per lb., 10 lb. lots, \$2.75; 25 lbs. and over at 25c. lb.; bale lots on application.

Can be sent by Parcel Post. For rates see 2d page of cover.

COLORED RAPHIA, for basket making, etc., red, yellow, orange, blue, black, green, pink, purple, etc., Price, $\frac{1}{4}$ hanks, 30c. per lb., \$1.00.

In boxes of 12 1½ ounce packages, \$1.00.

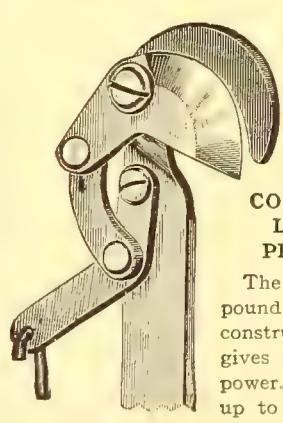
**LITTLE GIANT PRUNER AND SAW COMBINED.**

The knife operates with a cord; a spring throws the knife back.

Saw can be removed when desired; attaches to pole of any length. Price, without pole, \$2.00. P.P. 4 lb.

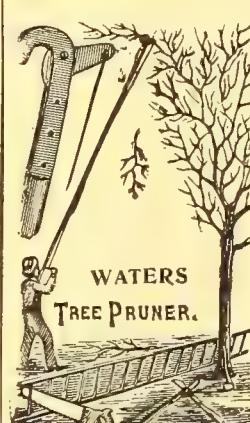
**COMBINED PRUNING SAW AND CHISEL.**

A handy tool; attaches to pole of any length. With a thrust the chisel cuts off small branches. The saw is for larger limbs. Price, (without pole) \$1.50 P.P. 3 lb.

**COMPOUND LEVER PRUNER.**

The Compound lever construction gives great power. Limbs up to 1½ inches in diam. may

be cut off with ease; does double the work of any other pruner with less exertion. Blades forged from high grade crucible steel. Price on 10 ft. pole, \$3.00; 12 ft. pole, \$3.25; 14 ft. pole, \$3.50; 16 ft. pole, \$3.75.

**WATERS TREE PRUNER.**

With 4 ft. handle 85c.; 6 foot 95c.; 8 foot \$1.05; 10 ft. \$1.15; 12 ft. \$1.25
Extra knives, each 25c.

**TELEGRAPH TREE PRUNER.**

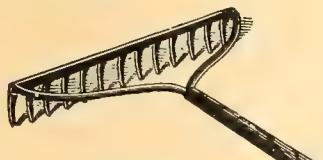
Attaches to pole of any length, operates with a cord; a spring throws knife back in position. Price, (without pole), \$1.15. P.P. 2 lb.

STEEL GARDEN RAKE.



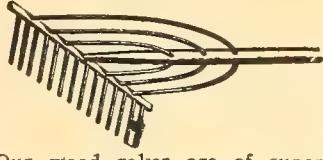
Steel Garden Rakes, 10 teeth, 60c.; 12 teeth, 65c.; 14 teeth, 75c.; 16 teeth 80c.
Fine Tooth Steel Gravel Rakes, 16 teeth, 85c.; 18 teeth, 95c.

STEEL BOW RAKE.



Steel "Bow" Garden Rakes. The best rake; does not break in middle; 12 teeth 85c.; 14 teeth, 90c.; 16 teeth, 95c.

WOOD HAY RAKE.



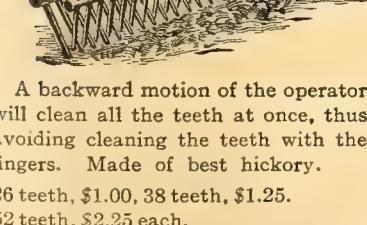
Our wood rakes are of superior grade; selected wood; 3 bow. Wood Hay, 12 teeth, 45c. ea., \$5.00 doz. Wood Lawn, 24 teeth, 45c. ea., \$5.00 doz.

REVERSIBLE STEEL LAWN RAKE.



Heavily tinned steel teeth. The arched teeth for leaves and litter and the opposite side for fine cut grass. Twenty-four teeth closely set in a 21-inch head. Price, 60c. each.

AUTOMATIC SELF-CLEANING LAWN RAKE



A backward motion of the operator will clean all the teeth at once, thus avoiding cleaning the teeth with the fingers. Made of best hickory. 26 teeth, \$1.00, 38 teeth, \$1.25. 52 teeth, \$2.25 each.

PLAIN "ONE-EDGE" PRUNING SAW.

This style is still a favorite with many pruners. The blade being narrow gets among close limbs, and the upper edge being smooth does not cut the upper limb. 14-inch, 70c.; 16-inch, 80c.; 18-inch, 90c.; 20-inch, \$1.00 P.P. 2 lb.

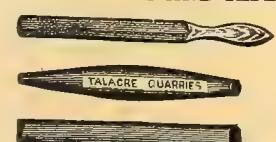
SWIVEL PRUNING SAW.

Very handy for getting among closely branched limbs; blade can be swiveled around in the frame to suit any position required. The handle can be unscrewed and a pole attached when desired. Price, \$1.75, P.P. 3 lb.; extra blades, 60c. each.

SCYTHE SNATH OR HANDLES.

Grass Snaths, extra quality, patent socket, \$1.25 each, \$12.50 doz. Bush Snaths, double ring, screw nibs, iron ferrule, \$1.25.

SCYTHE STONES AND RIFLES.



Genuine English Talacre; round taper ends, 40c. each, \$4.00 doz. "Ohio Red-end," flat stone, 5c. each, 50c. doz.; Rifles, quadruple emery-coated 12c. each, \$1.25 doz.

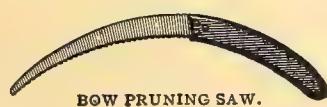


GEM DANDELION AND LAWN RAKE.

This new rake is designed for use on golf courses, tennis courts, and lawns. The blade of saw steel is 16 inches long by $4\frac{1}{2}$ inches wide and is curved to hold fine cut grass, leaves, litter, etc. The V-shaped teeth cut off dandelion heads and other weeds preventing them from going to seed. A strong durable efficient rake. Price 65c.

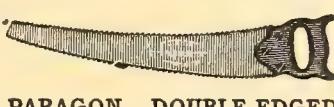
GOLF LAWN RAKE.

A fine toothed sheet metal rake with self cleaner. The stripper being operated by a wire trigger attached to the handle, so the contents can be deposited in a basket without handling. The teeth are curved so they ride over the ground, removing all trash, cut grass, worm casts, dandelion flowers, leaves, etc. For worm casts and dandelions on putting greens, this rake is especially recommended. Price, 16 inch size \$1.75; 24 inch size \$2.25.



CALIFORNIA BOW-SHAPED PRUNING SAW.

Very popular among orange growers but equally useful for all low pruning work. 14-inch saw, 75c.; 16-inch, 85c.; 18-inch, 95c.; 20-inch, \$1.10 P.P. 2 lb.



PARAGON DOUBLE-EDGED PRUNING SAW.

A splendid tool for the purpose. The convex edge is for thrust-cutting; the concave edge for draw-cutting. 16-inch, 90c.; 18-inch, \$1.00; 20-inch, \$1.2. P.P. 2 lb.



RHODES POLE PRUNING SAW.

Adjustable to any angle. Thrust cut on convex edge. Draw cut on concave edge. Pole ten feet long. Saw made of best quality spring steel. Price, \$2.50.

CLIPPER GRASS SCYTHES.



Clipper grass Scythes. Hollow ground, 32 inch, \$1.25; 34 inch, \$1.35; 36 inch, \$1.40; 38 inch, \$1.50.



IMPORTED GRAPE-THINNING SCISSORS.

Finest quality, imported. Used for thinning out the grapes in the bunches, allowing the remaining ones to develop, \$1.25 P.P. 4 oz.



BUSH AND BRAMBLE SCYTHES.

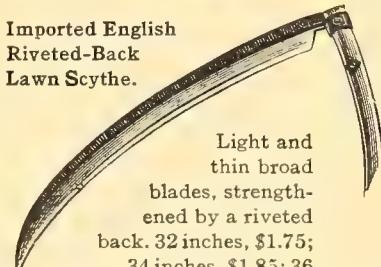
Weed and Bramble Scythe, \$1.50. Bush Scythe, \$1.35. Scythe snaths, extra, \$1.25.



IMPORTED FLOWER-GATHERING SCISSORS.

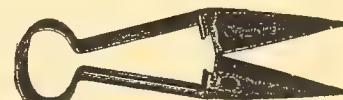
Finest quality, imported. Cuts and holds the flower, \$1.25 P.P. 4 oz.

Imported English Riveted-Back Lawn Scythe.

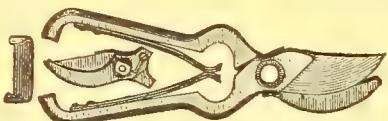


Light and thin broad blades, strengthened by a riveted back. 32 inches, \$1.75; 34 inches, \$1.85; 36 inches, \$2.00; 38 inches \$2.25.

Scythe Snaths or Handles. With patent fastening \$1.25. each.



SHEEP-SHEARING SHEARS. Standard 5 inch blades, 50c. P.P. 1 lb.



SWISS PATTERN PRUNING SHEARS.

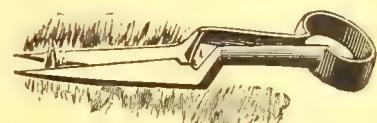
Full polished, best quality crucible steel blades, tempered, ground convex; adjusting nut and regulating ratchet; longitudinal double brass spring; removable handle-clip.

Made in 9 inch size.

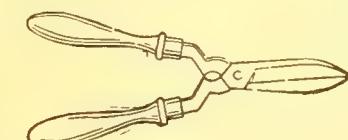
Each shear individually boxed, with an extra blade, which practically doubles the life of the shear.

Price \$2.00 pair.

"TROWEL SHANK" GRASS SHEARS.



Solid steel, of finest quality and temper; 7-inch blades. The raised trowel-like handles keep the knuckles off the ground and allow smoother cutting. \$1.00 P.P. 2 lb.



LADIES' ENGLISH GARDEN SHEARS.

Blades of the best steel, handles stained and varnished; light and very useful for general trimming in the garden, \$1.50. P.P. 3 lb.

FARMER'S UTILITY SHOVEL.



The blade is perfectly flat, rendering it useful in handling manure, snow, etc. Price, 1.25.

SCOOP SHOVEL.



Henderson's Extra Quality, steel, No. 2 (10 $\frac{1}{2}$ x 14 inch). D handle, \$1.50. No. 3, (11 $\frac{1}{2}$ x 15 inch). D handle, \$1.60.

POST HOLE SPADE.



A polished concave blade tapering from six inches at point to 5 $\frac{1}{2}$ inches at shoulder. 16 inch, \$2.00; 18 inch, \$2.25; 20 inch, \$2.50.

HENDERSON'S XX PRUNING SHEARS. (the finest made.)



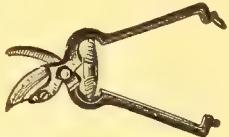
The highest grade pruners made. Finest steel best temper. The blade is detachable, the ratchet nut keeps them properly tightened up. 9-inch, \$1.50; 10 inch, \$1.75. P.P. 2 lb.

GRASS EDGING OR BORDER SHEARS.



For trimming the overhanging grass around the edges of walks, etc. Price, 9-inch blades, \$3.00 or with wheel, \$3.50.

"CALIFORNIA" PRUNING SHEAR.



A good low-priced article. Black malleable handles. Steel detachable blade. 8-inch, 60c. P.P. 1 lb.

LADIES' NICKLE PLATED PRUNING SHEARS.

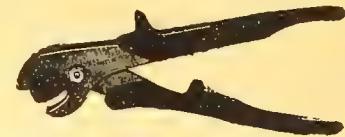
\$1.00, P.P. 1 lb.



LAWN SHEARS.

For cutting grass under shrubs, fences, etc. Price, with two wheels, 9-inch blades, \$3.75.

LEVIN'S PATENT PRUNING SHEARS.



Very popular where known; the cutting blade working between steel faces is very thin, cuts easily, malleable handles. Medium size, 60c., P.P. 1 lb. Full size, 75c., P.P. 2 lb.

HEDGE SHEARS.

For both trimming hedges and cutting grass under fences, bushes, etc.

The "Notch" at the heel of the blade is for cutting branches.

English Hedge Shears.

8-inch blades	\$1.50;	with notch	1.75
9- "	"	"	2.00
10- "	"	"	2.25

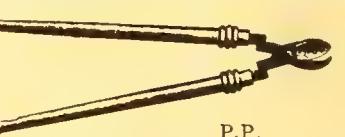


Swedish Hedge Shears.

The very highest quality manufactured.

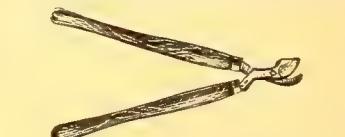
8-inch blades with notch	....	\$2.50
9- "	"	2.75
10- "	"	3.00
Mail weight 8 and 9 inch	4 lbs.	
each; 10-inch	5 lbs.	

ENGLISH LOPPING SHEARS.



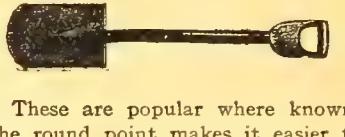
P.P.		
No. 1, 20-inch handles, 5 lbs	....	\$3.00
" 2, 24 "	"	3.50
" 3, 28 "	"	4.00
" 4, 32 "	"	4.50

AMERICAN LOPPING SHEARS.



For lopping off limbs and branches of trees not over 1 $\frac{1}{4}$ in. in diameter. 2-ft. handles, \$1.25; P.P. 4 lbs. 3-ft. handles, \$1.50; P.P. 5 lbs.

ROUND POINT SPADES.



ROUND POINT SHOVEL.



Henderson's Standard Quality, steel, smooth backs, strapped. No. 2, D handle, \$1.35; long handle, \$1.35.

SQUARE POINT SHOVEL.



Henderson's Standard Quality, steel strapped, smooth backs. No. 2, D handle, \$1.35; long handle, \$1.35.

Boy's Shovels, 95c.

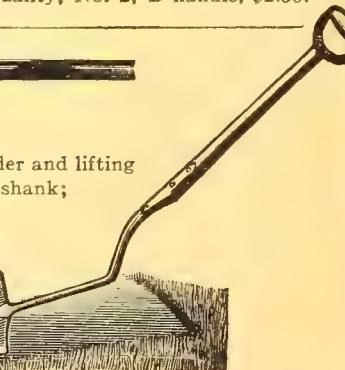
U. S. SOD LIFTER.

A handy tool for cutting under and lifting sod; solid steel blade; 18-inch shank; D-handle. Price, \$1.75.

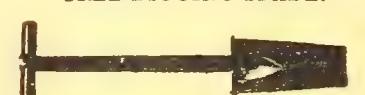
ENGLISH TURFING SPADE

For lifting sod evenly, rapidly, and without breaking, \$6.00

These are popular where known; the round point makes it easier to enter hard ground. Ames' extra quality, No. 2, D handle, \$2.00.



TREE DIGGING SPADE.



A strong, powerful spade strapped the entire length of handle, size 14 $\frac{1}{2}$ x 7 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Ames' extra quality, \$3.50.

Nursery Spade, similar to above strapped half way, size 12 $\frac{1}{2}$ x 7 $\frac{1}{2}$ x 7 $\frac{1}{2}$. \$2.75.

HENDERSON'S BRASS SYRINGES.

These Syringes are applicable for all horticultural purpose in the conservatory and garden. They are fitted with Caps for ejecting water in one stream or dispersing it in a fine or coarse spray, as required. Specially adapted for applying fluid insecticides.



No. A. Length of barrel, 12 ins.; diam., 1 in.; 1 spray rose and 1 jet, \$2.75. P.P. 3 lb.



No. H. Sheet brass Syringe, with fixed spray rose; barrel 16 ins. long; 1½ ins. diameter, \$3.00. P.P. 4 lb.

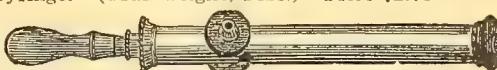


No. G. Barrel 16 ins. long; 1½ ins. diam. 1 spray rose and 1 stream jet, side attachment and elbow joint for sprinkling under foliage, \$4.50. P.P. 4 lb.



No. 2. Barrel 13½ ins. long; diam., 15-16 ins.; 1 coarse and 1 fine spray rose and 1 jet, side attachment, \$4.50. P.P. 4 lb.

The Henderson Special. Solid brass barrel, 20 inches long by 1½ inches in diameter inside, wooden plunger, 1 fine spray rose; a good low priced large Syringe. (Mail weight, 4 lbs.) Price \$2.75.



No. 10. Barrel 18 ins. long; diam. 1½ ins.; 1 coarse and 1 fine spray rose and 1 stream jet, with patent valves and elbow joint for sprinkling under the foliage, \$7.00. P.P. 5 lb.



No. 11. Same as No. 10, without patent valves, \$5.50. P.P. 5 lb.

JAPANNED TIN CASE THERMOMETERS.



8 inch, 35c.; 10 inch, 45c.; 12 inch, 50c. P.P. 1 lb.

SIEKE'S THERMOMETER.

Registers both Heat and Cold.



Price include magnet for drawing registering needles back. 8 inch, \$3.25; 10 inch, \$3.75; 12 inch, \$4.25. P.P. 3 lb.

TREE SCRAPER.



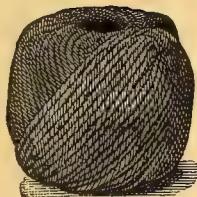
An important tool for scraping diseased bark from trees, removing insect eggs, cocoons, etc., 60c. P.P. 2 lb.

SOLID STEEL TROWEL



The cheapest trowel in the long run, light, strong, durable and perfect "hang;" handle cannot come off, 5-inch blade, 45c.; 6-inch, 50c.; 7 inch, 55c.; P.P. 1 lb.

Ordinary Trowels, 5 inch, 15c.; 6 inch, 20c.; 7 inch, 25c. P.P. 1 lb.



JUTE TWINE.

Soft and strong and durable for bunching vegetables, tying up vines, tomatoes, etc.

2 ply for bunching Radishes, etc. 3 " " Celery, etc. 5 " " Asparagus, etc. Price, large balls 25c. ea.; \$2.50 doz.

HOUSEHOLD THERMOMETERS.



Wood back, natural finish. 8 inch, 50c.; 10 inch, 75c. P.P. 1 lb.

REGISTERING THERMOMETERS.



Minimum or cold registering, 8 inch, wood case, \$1.00.

Maximum, or heat registering, 8 inch, wood case, \$1.15. P.P. 1 lb.

HEART-SHAPED TROWEL.



P.P. 1 lb.

Heart shaped blade 4¾ in. wide for planting out plants from large pots, transplanting bulbs, etc. Price, 60c.

"SLIM JIM" TROWEL.



A perfect trowel for making small, deep holes for transplanting and putting in bulbs; solid steel strong and serviceable. No. A., 10 inches long, 20c.; No. B., 13 inches long, 25c. each. P.P. 1 lb.

"DISTANCE READING" THERMOMETERS.



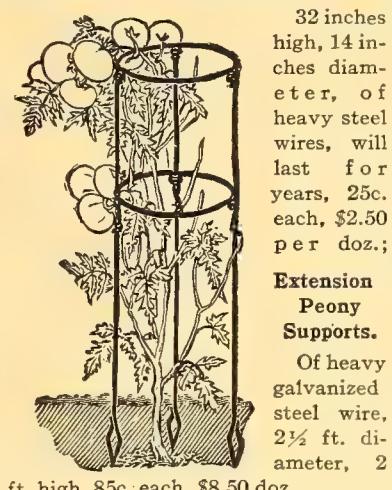
Wood backs, porcelain scale, bold figures, magnifying tube. 8 inch, \$1.25; 10 inch, \$1.50; 12 inch, \$1.75. P.P. 2 lb.

DISTANCE READING THERMOMETER



Coppered metal case black oxidized scales white filled figures and graduations. Scale range 20° to 30° below zero to 120° above. Price, 8-in., 50c.; 10-in., 75c.

EXTENSION TOMATO SUPPORTS



32 inches high, 14 inches diameter, of heavy steel wires, will last for years, 25c. each, \$2.50 per doz.

Extension Peony Supports.

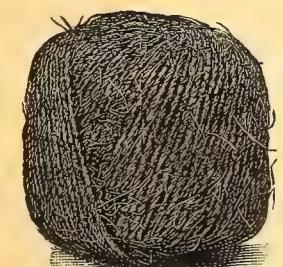
Of heavy galvanized steel wire, 2½ ft. diameter, 2

ft. high, 85c. each, \$8.50 doz.

VINE OR WALL NAILS.

Splendid invention for fastening vines to walls, houses, trellis etc., the lead clip being pliable; turn over the vine holding it in place, and will

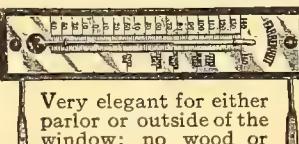
give sufficiently to prevent binding as the vine expands with age. 1 inch per 100, \$1.50. P.P. 3 lbs. 1½ in., \$1.80 per 100, P.P. 4 lbs. 2 in., \$2.00 per 100, P.P. 5 lb.



TARRED MARLIN TWINE.

Very strong and durable for bundling trees, shrubs and many other purposes. Price, 2 lb. balls, 50c. \$5.00 doz.

PLATE GLASS THERMOMETERS.



P.P. 2 lb.

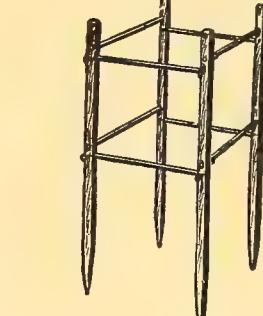
Very elegant for either parlor or outside of the window; no wood or metal to get shabby. bevel edge, white enamel face. Price, includes arms for attaching. 8 inch, \$1.25. 10 inch, \$1.50. 12 inch, \$1.75. P.P. 2 lb.

HOT BED AND MUSHROOM BED THERMOMETERS.

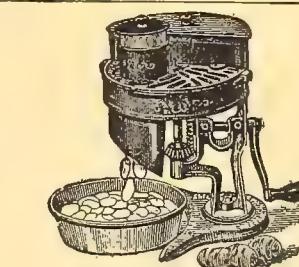


Brass tipped point encloses the temperature bulb; it is simply thrust into the soil or bed. Best grade, \$1.75. P.P. 2 lb.

PERFECTION PATENT WOOD. Tomato Supports.



36 inches high, 16 inches wide, made of clear straight wood. Can be taken apart and stored when not in use. Solidly made and will last for years. Price, 25c. each, P.P. 4 lbs. \$2.50 doz.



LARGE VEGETABLE SLICER.

For slicing, thin or thick, vegetables and fruits, such as cabbage for kraut or slaw, potatoes, beets, turnips, carrots, cucumbers, egg plants, pumpkins, squash, onion, citron, melon rind, pineapples, apples for drying, etc. Price, \$6.00.

WATERING POTS

Regular Style, galvanized iron, 6-quart, 90c.; 8-quart, \$1.00; 10-quart, \$1.25; 12-quart, \$1.50, 16-quart, \$1.75.

French or Oval Shaped Watering Pots.

Easily carried in narrow places. 6-quart, \$2.75; 8-quart, \$3.00; 10-quart, \$3.25; 12-quart, \$3.50.

"Common Sense" Watering Pots.

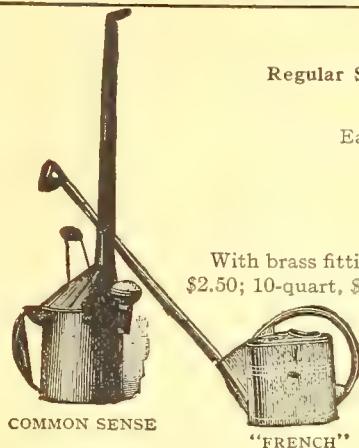
2-quart, \$1.50; 4-quart, \$1.75; 6-quart, \$2.00.

Wotherspoon's Galvanized Watering Pots.

With brass fittings and two brass roses, one fine and one coarse, with each pot, 6-quart, \$2.35; 8-quart, \$2.50; 10-quart, \$2.75; 12-quart, \$3.15; 16-quart, \$3.50.

ENGLISH PATTERN WATERING POT.

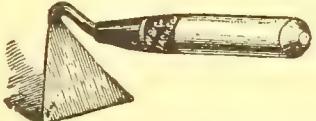
Made of heavy tin, japanned with two roses, both copper faced—the oval one directs the water upward so it falls in a gentle shower for seedlings. The round one is for ordinary watering; the long spout arrangement of the handle, permits a long reach. Price, 4-quart, \$2.50; 6-quart, \$2.75; 8-quart, \$3.00; 10-quart, \$3.25..



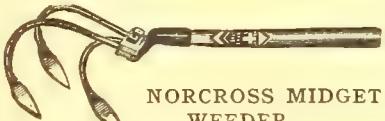
Combined weeder and hoe. The fingers are made of oil tempered steel. The hoe is useful in loosening hard ground. Price, 35c. each, \$3.50 per doz. P.P. 2 lb.

LANG'S HAND WEEDEER.

A strap over the fingers keeps the tool in the hand while operator's fingers are left free, 20c. each, \$2.25 per doz. P.P. 1 lb.

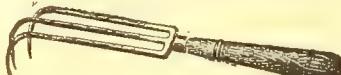
THREE CORNERED ONION WEEDEER.

A popular tool for weeding among onions and other rowed crops. 35c. each, \$3.50 per doz. P.P. 1 lb.

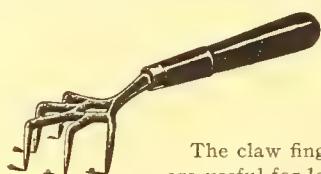


It has a 9-inch handle and is designed for cultivating any sort of vegetation where the use of a long handle tool would be less practical. The prongs are 3-16 inch square, spring steel. Price, 35c. each. P.P. 3 lb.

garden rake with 6 teeth, round pointed and Excelsior Weeder five tools in all for \$1.75.

EUREKA HAND WEEDEER.

Our choice of the finger weeders; the prongs, being of solid forged steel, are thin and long, and get right down to work in loosening soil and breaking crust. Short handle, 35c. each; \$3.50 per doz., P.P. 2 lb.; long handle, 45c. each, \$4.50 per doz. (not mailable).

EXCELSIOR FINGER WEEDEER

The claw fingers are useful for loosening and pulverizing the soil. 10c. each, \$1.00 per doz. P.P. 1 lb.

CHISEL BLADE WEED CUTTER.

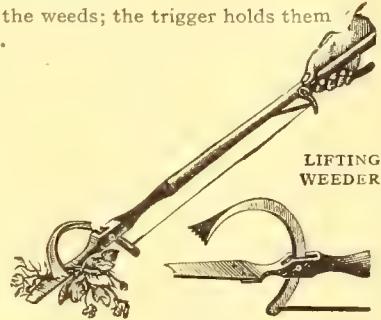
Long handled with foot rest so it can be pressed, cutting off roots or weeds without marring.

Price, 75c. each.

HENDERSON'S LIFTING WEEDEER.

A chisel blade cuts off the weeds; the trigger holds them so they can be pulled out.

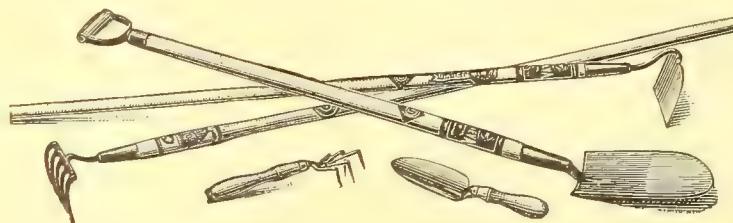
Price, 75c. each.

**SETS OF GARDEN TOOLS**

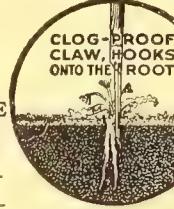
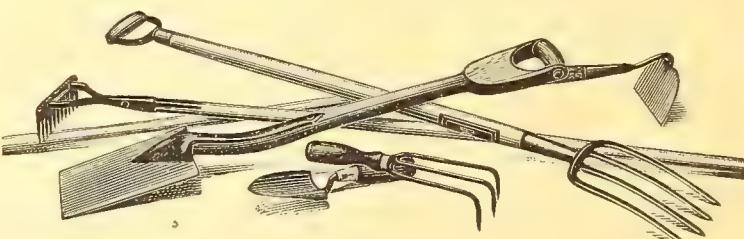
For Ladjes, Children and Youths.

LADIES' AND CHILDREN'S SET OF GARDEN TOOLS

Of good quality, made for use, not toys. Comprises a long handle hoe with 4-inch blade, long handled garden rake with 6 teeth, round pointed

**YOUTHS' SET OF HIGH GRADE GARDEN TOOLS**

This high quality set is made for business. It contains a 4-prong digging fork, shovel 7 x 9 inch blade; long handled hoe with 5-inch blade, long handled steel garden rake with 11 teeth, 5-inch solid steel trowel, and Eureka Weeder. Six tools in all for \$3.00.



CLOG-PROOF CLAW HOOKS ONTO THE ROOT

Beside Dandelions it pulls plantain and other weeds. Price, 50c.

HAZELTINE'S HAND WEEDEER.

A very popular style of hand weeder, and one of the best. Its peculiar shape permits a wide range of work. 25c. each, \$2.50 per doz. P.P. 1 lb.

DANDELION AND PLANTAIN SPUD.

A handy tool for cutting dandelions, plantain and other weeds out of the lawn. Also useful when out botanizing.

Price, 40c. P.P. 3/4 lb.

DANDELION PULLER.

Slide the steel blade into the soil, close to weed. Then push the handle toward the weed and pull up. The root is caught by a patented non-clogging double-tooth prong which projects from inside of blade, and up comes root to the last inch, nothing left to start new growth. As the pull is directly up, the ground and lawn around the weed is undisturbed.

Beside Dandelions it pulls plantain and other weeds. Price, 50c.

The Henderson Self-Adjusting Ball-Bearing Lawn Mower

THE KING OF LAWN MOWERS

LIGHT RUNNING NOISELESS
DOES NOT PULL THE GRASS

DURABLE SELF-ADJUSTING DRAW CUT ALWAYS SHARP
LEAVES THE LAWN SMOOTH AND FREE FROM CORRUGATION

THE HENDERSON BALL-BEARING MOWER has high drive wheels, large, open non-clogging cylinder. The spiral of the knives is correctly proportioned to give a continuous cut, leaving the lawn as smooth as if shaved entirely free from the corrugated surface left by other Mowers. The handles are braced and reinforced to prevent twisting and breaking when one side of the Mower is held off the ground, and besides the handle is equipped with improved "grips" which keeps the hands in a natural position, gives more power, and is less tiresome than a continued grasp, with wrists twisted, on a horizontal grip.

"We have been using one of your 21-inch Henderson Mowers for the past five years, mowing about an acre of lawn at least once a week, and it has cost us just 75c. for repairs—a record any machine might be proud of."

ESTATE JOHN MURRIN,

Carbondale, Pa.

THE HENDERSON BALL-BEARING LAWN MOWER is made without regard to cost—to be the best, most durable, and the easiest-working Mower on the market, and while the prices are necessarily a little higher than those of Mowers simply made to sell, yet in the end our Mower will prove much cheaper, aside from annoying delays and repairs experienced with cheap Mowers. It is superior to all other Mowers in the following respects; the axles of the revolving cutter, like the axles of a bicycle, work in self-adjusting "ball-bearing" journal boxes or cups, which reduces the friction enormously. The Mower is also built scientifically correct in other respects. The "draw-cut" principle corrects the defect in "push cut" Lawn Mowers, and completely reverses the old way of cutting the grass. The grass is drawn across the sharp edge of the Stationary Knife, which is the cutting knife, and is severed most easily, causing the mower to operate much more easily. It also prevents the mower from "bobbing up" in the rear, thus insuring an even cut. The heavier the grass, the closer the mower clings to the turf. It makes the mower self-sharpening; the drawing of the wiper blades across the edge of the stationary knife keeps it always sharp and prevents gouging. Where the "push cut" style of mower requires "sharpening" a dozen times, the Henderson Ball-Bearing "drawcut" mower will not need it once. It is a strictly high class Mower, made from the highest quality of iron and steel. The castings are lathe-turned and bored, and the journals machine-trimmed, which insures trueness in fitting and smoothness in working, with no irregularities to wear off and leave rattle and play. We have so simplified the adjustments in our new Ball-Bearing Mower that even those ignorant of mechanics will have no trouble in always keeping our Mower in fine cutting order for years and the lawn in uninjured condition.

PRICES FOR THE HENDERSON BALL-BEARING LAWN MOWERS.

(Strictly net; no charges for packing or cartage.)

	Five-Bladed.	Eight-Bladed.	Grass Catcher.
16-inch cut...	\$9.00	\$11.50	Extra, \$1.90
18-inch cut...	10.00	12.50	Extra, 2.00
21-inch cut...	11.00	14.00	Extra, 2.25

Note.—We can supply these mowers either with five or eight blades, but always send the five-bladed mower unless otherwise ordered. The eight-bladed mower cuts finer, can be set to mow close to ground, and is extensively used on putting-greens, but it runs a little harder than the five-bladed mower.

GRASS CATCHERS for the Henderson "Ball-Bearing" Lawn Mowers of superior heavy duck; bottom of galvanized iron that will not sag or drag on the ground when filled; they are quickly attached, removed or dumped. (For prices, see above.)

"The Henderson Ball-Bearing Lawn Mower, and the Sprinkler and Hose I bought from you, give great satisfaction. I am delighted with them."

WALTER G. FICKES,

Shippensburg, Pa.

"The Henderson Lawn Mower does most satisfactory work, and I am well pleased with it."

GEORGE VAN ALST,

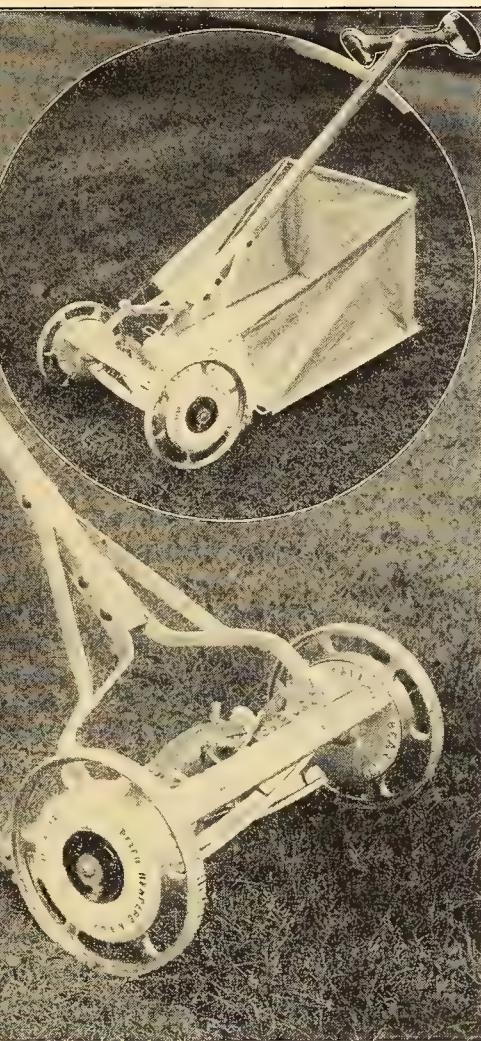
Montgomery, Ala.

"Your 'Henderson' Mower proves better than you claim for it. It is a delight to use it."

CLARENCE L. LERSCHNER,
Lotus Road,
Ridgewood,
N. J.

THE HENDERSON SELF-ADJUSTING BALL-BEARING LAWN MOWER
Supplied with either 5 or 8 bladed cutters

Upper illustration shows grass catcher attached



The Henderson Side-Wheel Ball-Bearing "Putting-Green" Mower

Eight-bladed—Close, Smooth Cutting—Easy Running

We offer this mower to Golf Clubs as the very best side-wheel mower ever devised for smooth, close work on putting-greens. It has an eight-bladed revolving cutter working in ball-bearings and speeded high, thus leaving the cut surface of the "green" absolutely free from corrugations, and almost as smooth as a billiard table. The knives can be set so low that they will fairly shave the ground if desired; though on a level, well-rolled green, with close, fine turf, a quarter to a half-inch clip leaves the surface in the nicest condition for putting. A well-known instructor and greenkeeper says: "It is the best mower for putting-greens that I have ever seen either in this country or in Scotland. It cuts the turf so short and even that it is like putting on a carpet."

Henderson's "Putting-Green" Mower is a thoroughly high-grade machine, carefully built of finest material, the knives especially being of finest steel. It runs easy, considering the number of knives and fine cut. Guaranteed satisfactory.

Prices (Strictly net; no charge for packing or cartage.)

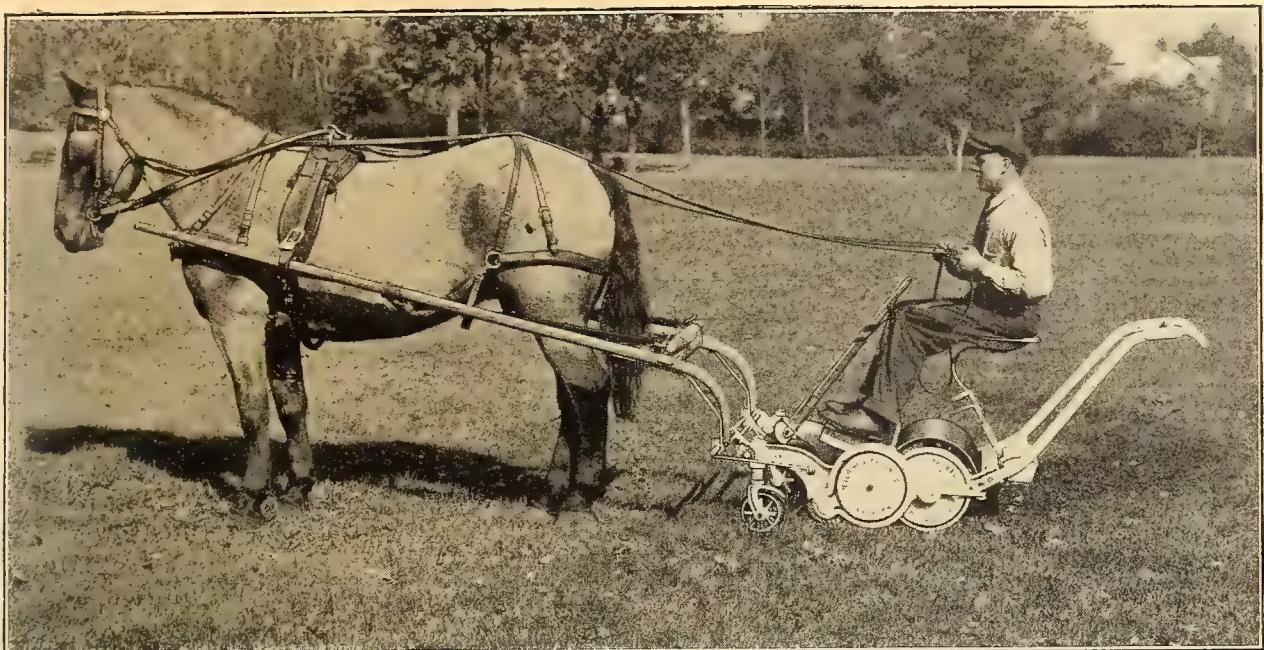
16-inch cut.....	\$11.50	— Grass Catcher (extra).....	\$1.90
18- " "	12.50	" " "	2.00
21- " "	14.00	" " "	2.25



For "Putting-Greens" the Henderson 8-bladed Ball-Bearing Lawn Mower is Superior to any "Side-Wheel" Mower Made

THE NEW IMPROVED HENDERSON

Horse Lawn Mower and Roller Combined



For Large Lawns,
Golf Courses,
Cemeteries,
Parks, etc.

The latest and
best.

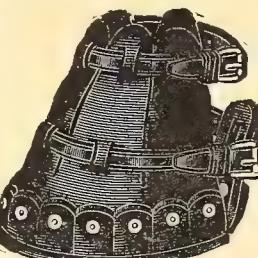
Knives can be
raised or lowered
instantly.

*Side draft rod attaches
to the left side of mower
and keeps horse off un-
cut grass.*

Henderson's Improved Horse Boots

Prevent horses' hoofs
from cutting into soft
lawns. Made of superior
leather with improved
double thick riveted soles
and strap around the
hoof. In ordering send
outline of hoof.

Per set of four, \$12.00.



The New Improved Henderson Horse Lawn Mower

We consider this to be the best horse power Lawn Mower on the market. It is simple in construction and very durable, the best steel and iron being used in its manufacture, and it is finished in the most perfect manner.

A lever beside the driver enables him to cut grass any height, high or low from the ground and to easily and quickly raise the blades over stones or other obstruction without stopping the horse or leaving his seat. A slight movement of a small lever throws the mower in or out of gear without stopping. The side draft rod is attached to the left side of the mower keeping the horse on the cut grass, and preventing the trampling down of the grass which is to be cut. The revolving knives, five in number, are "high speeded," making a continuous cut and leaving the surface of the lawn as smooth as velvet. The rollers, three in number, 15 inches in diameter, with triple paws in each roll make the most powerful and instantaneous drawing mechanism ever put in a lawn mower. This feature maintains the motion of the blades even when turning sharp corners, a great advantage over other double roll mowers whose knives have no motion when turning corners. The self-aligning journal boxes are a very valuable improvement and prevent cramping of the journals, a very common and dangerous fault in many horse mowers. The foot rest is spacious and prevents cramping of limbs and accidents through the feet slipping into the revolving cutters.

These mowers will weigh, including shafts and driver, 600 to 700 pounds, thereby rolling the lawn at the same time it is cutting; or the cutter may be thrown out of gear, and the machine used for rolling alone.

Prices for the New Improved Henderson Horse Lawn Mower and Roller combined, complete with Tool Box, Seat, Shafts, and side Draft Attachment:

30-inch cut, net weight 485 lbs., packed weight 625 lbs.....	\$80.00
35-inch cut, net weight 505 lbs., packed weight 665 lbs.....	90.00
40-inch cut, net weight 520 lbs., packed weight 695 lbs.....	100.00

Townsend's "Triplex" Horse Lawn Mower

For large lawns, parks, golf courses, etc., it is a boon, cutting a swath over seven feet (86 inches) wide; doing the work of two motor mowers at an eighth of the expense. The series of three mowers adapt themselves to uneven surface, mowing over ridges and through hollows as well as level ground. Simple, durable and light running. Easily drawn by one horse—all day long—and operated by any man capable of driving.

With the Triplex Mower one man and one horse will cut more grass in a day than three men and three horses with three ordinary lawn mowers, and will cut as much grass as any two motor mowers, cut it better—without crushing the life out of soft turf—and at a small fraction of the cost.

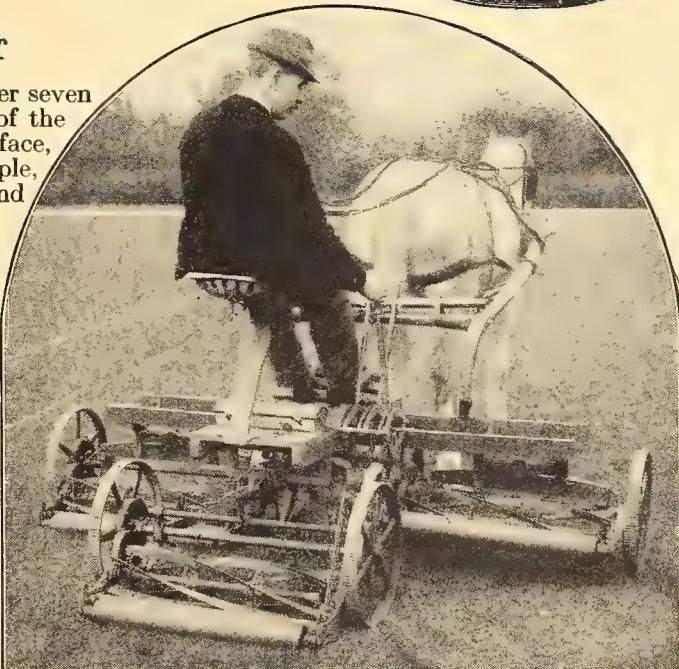
The Triplex consists of three lawn mowers yoked together two abreast, and one following in the center, lapping each front mower, thus cutting a clear swath eighty-six inches wide. As the three mowers work independently of each other, and are so connected from their centers to the main frame that they can swivel, rise and fall, they therefore adapt themselves to the contour of the ground—floating over ridges and down hollows—mowing the grass as perfectly as on the level, and better than is possible with a long straight-edged bottom knife mower of any kind.

On rolling ground the Triplex Mower shows its qualities to perfection, holding to a side hill where a motor mower will slide sidewise. It is of extremely light draught, due partly to ball bearings and partly to the excellence of design, material and workmanship.

Three levers at the driver's right enable him to lift any one or all of the cutting apparatus from the ground to avoid obstructions, or in going to and from the field. A small knob in the center of each wheel operates the clutch throwing the machines in and out of gear.

The mower is provided with a spring seat, ample foot rest, shafts, iron tool box with tools and oil can. Net weight, 600 lbs.

The mowers are packed singly in crates, the frame work is shipped assembled. It is only the work of ten minutes to assemble the machines and attach the shafts. Price, \$275.00 net, F. O. B. New York.



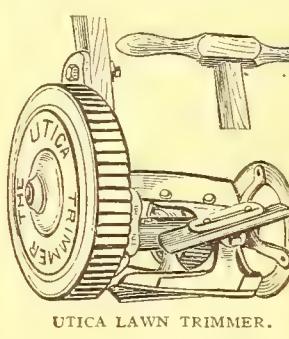
TOWNSEND'S "TRIPLEX" HORSE LAWN MOWER



The "Everwear" Lawn and Walk Sweeper.

A large carpet sweeper-like machine, fitted with a revolving reel, 12 inches in diameter, composed of a series of eight Palmetto fibre brushes—the toughest and most durable fibre known and absolutely unaffected by water. All cut grass, leaves, litter, twigs, small stones, etc., are swept into the collecting box, which is dumped by simply pulling the chain. The machine can be adjusted for close or light sweeping adapting it for lawns, tennis courts, putting greens, etc., as well as walks and stable floors. The brush reels automatically take up the wear of the fibre brushes. The drive wheels are 15 inches in diameter, giving a powerful spin to the reel and pushing as easily as a lawn mower and reduces the labor of hours to a few minutes. Lawns swept with these sweepers have a bright, clean velvet-like appearance. Price, 24-inch Lawn Sweeper, \$14.00; 28-inch Sweeper \$15.00.

Rubber Tires, extra, \$2.00 pair.



UTICA LAWN TRIMMER.

THE UNIVERSAL LAWN TRIMMER.

The latest and best machine that we know of for trimming grass close up to the fence or wall, thus reducing hand work with shears to a minimum. It will also be found handy for trimming up around trees, under bushes, etc., and in cemeteries it will be a boon. It cuts 6 inches in width.

This Lawn Trimmer is a high-grade machine in every respect with self-adjusting ball bearings preventing any "end play," thus keeping the knives always set, wearing to the same bevel and therefore always sharp. The handle being on line with the driving wheel overcomes the tendency of the machine to run sidewise—so annoying in other machines designed for a similar purpose. Price, \$5.50.

The Utica Lawn Trimmer.

A similar but lower priced machine than the Universal, and designed for the same purpose. It trims close up to borders and edgings and is a great help in keeping lawn and grass plots trim.

Price, \$4.00.



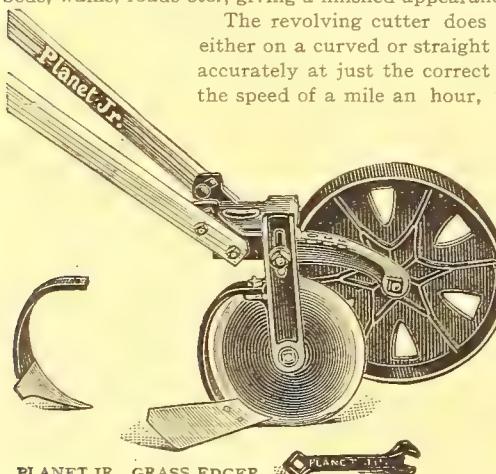
Planet, Jr., Grass Edger.

This little tool trims the turf around the edges of the flower beds, walks, roads etc.; giving a finished appearance to the lawn.

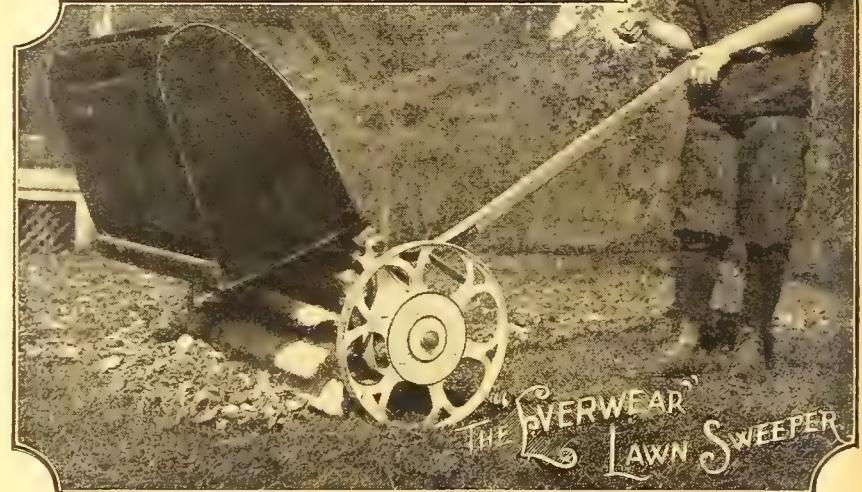
The revolving cutter does perfect work, either on a curved or straight border, edging accurately at just the correct angle and at the speed of a mile an hour, while the hoe cleans the bottom of walk.

The hoe can be removed if desired. The small tooth is for cement and stone walks.

Price, complete, \$7.00.



PLANET JR., GRASS EDGER



Special Golf-Green Sweeper.

This is a practical necessity for Putting Greens, Bowling Greens, Grass Tennis Courts, etc. It keeps the grass and turf in perfect playing condition. The machine is the same as the lawn sweeper described above, excepting that the revolving brush is composed of alternating tufts of palmetto fibre and spring steel wire—thus combining the brush and comb method of cleaning the turf clear to the roots and free from worm casts and ant hills as well as litter. Price, 28-inch Special Golf Green Sweeper, \$18.00. Rubber Tires Extra, \$2.00.

The Pennsylvania Rotary Lawn Rake.

This machine will remove from the lawn not only the cut grass, but all sorts of litter leaves and trash, leaving the grass standing up right and free from foreign matter that prevents the sunlight and dew from getting to the roots.

The action of the three revolving 24-inch wire-tooth rakes is beneficial to the turf. It raises up the low growing crab, grass and other spreading weeds, allowing the lawn mower to cut the seeds pod off before they ripen, thus preventing their reappearing the following year. As these weeds and grasses are annuals, it is only necessary to prevent their going to seed for a season to get rid of them.

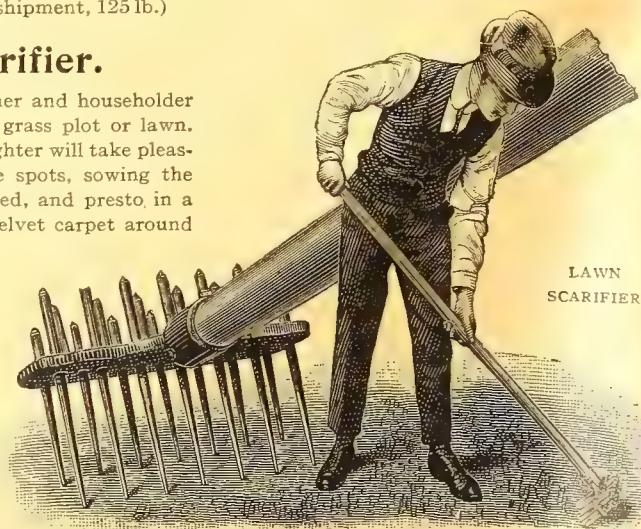
This machine is easy to operate and, with it, one man will do more and better work than four men with hand rakes.

Price, 24-inch machine, \$17.00. (Weight packed for shipment, 90 lb.) Price, 36-inch machine, \$26.00. (Weight packed for shipment, 125 lb.)

Lawn Scarifier.

Here is what every gardener and householder wants, or any one having a grass plot or lawn. Father or mother, son or daughter will take pleasure in breaking up the bare spots, sowing the "Henderson" Lawn Grass seed, and presto, in a few weeks there is a green velvet carpet around your home. It is also of great value for use in city parks, on golf courses, lawn tennis courts, polo fields, hunt and race courses, in fact any place where grass has become worn out and bare.

Price, \$3.00, or with tamper attachment, \$3.50.



LAWN SCARIFIER.

THE "VELVET LAWN" SEEDER.

Valuable machines involving new principals. Puts seed IN either new ground or old sod. For renewing or thickening the grass and renovating bad spots in lawns, tennis courts, putting greens, etc., without replowing, redigging, or marring the surface.

This is a valuable machine for seeding new lawns and doubly valuable for renovating wornout lawns and bad spots in Greens, Tennis Courts, etc., and without redigging or plowing, and without marring the surface. It puts the seed IN newly prepared ground or IN old sod—covers it and rolls it.

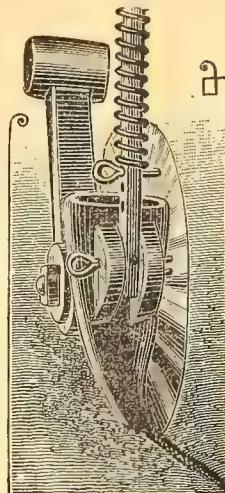
The seed is evenly distributed, wind or no wind, much or little as may be desired, and at any required reasonable depth according to how the machine is adjusted by the operator. The even distribution of the seed and its uniform depth insures an even stand of grass—not too thick in some places and too thin in others. The illustration on the right shows how the above claims are accomplished. The revolving steel discs cut a narrow gash or trench in the ground or sod—the seed is forced through the "boot" the spout of which directs the seed into the trench when at its deepest immediately under the rear of the cutting discs, the roller then follows closing up the gash and of course covering the seed. There are eight of these discs with their accompanying seed spouts. These sow 2 inches apart—thus the machine sows a strip 16 inches wide as fast as a man can walk. It will sow and cross sow an area 50 x 150 feet in thirty minutes.

As each disc, seed spout and roller work individually they therefore adapt themselves to inequalities of the ground, insuring a perfect stand of grass, and the cutting (not tearing) of the old sod in this way has proven beneficial, a sort of a cultivation that relieves its hide bound condition.

The machines have "force feeds" one to each disc and seed spout—every feed sows an equal amount of seed and a gauge regulates the quantity sown whether the machines are going fast or slow. The flow of seed can immediately be shut off by moving a lever.

The seed must grow because it is IN the ground and not on top of it.

No seed is wasted. Birds cannot get it, rain can not wash it nor wind blow it away. In new ground or soft turf it is easily operated by one man but in old hard sod it may require another person to pull. Price \$20.00.



The revolving cutting Disc and seed boot—used on the velvet lawn Seeders.

Illustrating the cutting of a narrow gash in the sod and the boot sowing the seed immediately behind the gash which is then closed by the roller following.

HENDERSON'S Sod Perforator.

An invaluable tool to aid in renovating bad spots in lawns, grass plots, putting greens, etc.

It is operated like a rammer, the lower surface being provided with spikes which puncture the sod, leaving small holes into which much of the seed or fertilizer drops when broadcasted, thus preventing its being blown or washed away.

The holes are filled with soil by the first rain, which covers the seed so it can germinate. Price, \$3.50.



HENDERSON'S "CHAMPION" SOD CUTTER.

A horse-power machine for cutting sod in long strips; an important and valuable implement for golf grounds parks and other places which have much sod laying or repairing to do. It cuts the sod of uniform width and thickness, in any length, so that it is particularly adapted to giving solidity to slopes in cuts and on embankments, working equally well on level or uneven surface, cutting both ways with the land, and leaving no sod uncut, being light of draft, easily managed, strong, neat and durable. It is the best and cleanest sod-cutting machine in America.

Has a Reversible Knife made of one piece of steel. While one side dulls, the opposite edge is getting sharpened; cannot get choked. An Adjustable Roller regulates the thickness of the sod from one-half inch to two inches; the front roller swings back under the guide-shoe and takes the weight when the machine is not cutting. The guide-shoe can be changed to either side in a minute; no friction or injury to the grass. The knife can be cleaned without turning over the machine. One machine will cut from 30,000 to 40,000 square feet per day, doing the work of forty men; the expense saved between cutting by hand and with horse power in one day is enough to pay the price of our machine. Instructions for operating furnished with every machine. Price, \$27.00. Extra knives, \$5.00 each.



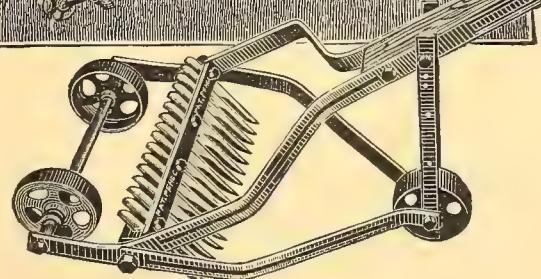
THE McINTOSH LAWN CULTIVATOR.

A new and splendid invention for improving and repairing lawns, putting greens, grass tennis courts, etc. It pushes as easily as a lawn mower, cutting narrow almost invisible grooves in the turf $\frac{3}{4}$ of an inch apart (or by removing every other knife $1\frac{1}{2}$ inches apart) and $\frac{3}{4}$ to 2 inches deep as set over a 12-inch strip as fast as a man can walk. This enables seed broadcasted either before or after it to be brushed or rolled in to the loosened soil in the grooves where the grass can germinate and get a root hold and not be dried out, washed or blown away as too often is the case when grass seed is merely broadcasted over a non-scarified turf. There are 16 knives, $5\frac{1}{2}$ inches long made of the finest Sheffield steel. They are perfectly straight, easily removed for sharpening and adjustable to take up the wear until only 2 or 3 inches long when they may be quickly replaced by a new set. These knives slant backwards making a draw cut which does not disturb thin sod nor tear it up and expose the roots as often happens when a scarifying rake is used.

Other benefits from the use of the McIntosh Lawn Cultivator: It cultivates, loosens and aerates hard surfaces and "hide bound" sod, increases the root joints and allows the roots to spread thereby making a thicker growth of grass and consequently of finer texture. It also permits water and fertilizer to reach the roots where needed and besides eventually eliminates creeping crab grass, groundsel, etc., by cutting them into short joints and removing the seed bearing stems. It is also effectual for dandelion and plantain, cutting the large leaves and crowns so the grass can grow close up to the roots and smothering them out. It is not necessary to cut into the turf deeply, just enough pressure should be given to cut through the grass mat. Price \$25.00.

"Please send at once one more McIntosh Lawn Cultivator. Have used the one purchased this spring with great success and think they are indispensable for use on lawns and greens".

BERT KROOSTAD, Professional, Bridgewater Golf Club, Chicago, Ill.



THE HENDERSON Cast Iron Water Ballast Roller.

The advantages of a roller, the weight of which can be increased or lightened at pleasure, can scarcely be over-estimated. Often on light or sandy soil, or on newly made lawns, or in early spring when the ground is moist or after a rainy spell, a lighter-weight roller is a necessity; then on thick sward or on hard soil, on walks and roads, a heavy roller is needed. With a Henderson Water Ballast Roller one can secure any weight desired, between minimum and maximum, by simply removing a thumb-cap from each end and filling the two hollow sections with as much water or sand as may be needed, which is easily and quickly done with a hose or through a funnel; and the roller is as quickly emptied. The inside being heavily galvanized, it will last for years.

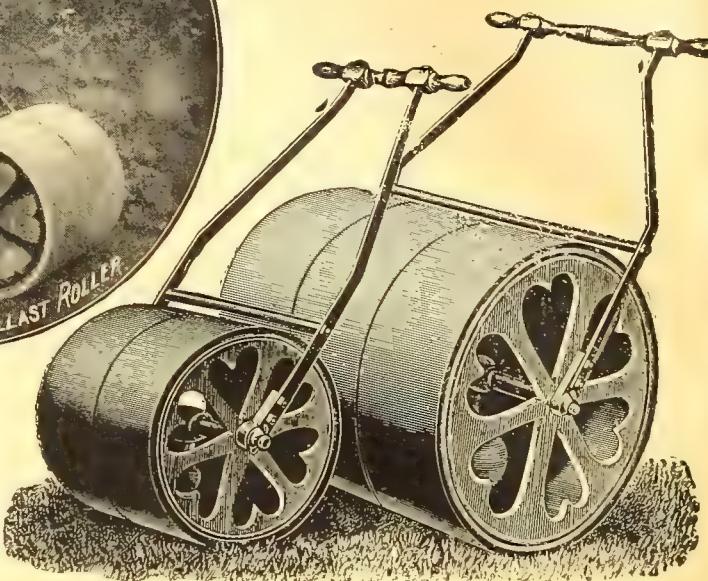
These are perfect rollers, and do perfect work on lawns, tennis courts, golf grounds, roads, walks, etc. They are high-grade in every respect, being carefully manufactured of best material, and the diameter is large, insuring a lighter draft for a given weight than is usual.

The Henderson Patent Water Ballast Roller for man power. Weighs 300 lbs.; loads up to 600 lbs.; tracks, 24 inches, diameter of drums, 24 inches; counterbalanced handle, stands erect when not in use. Price, \$28.00.

SHEET IRON WATER WEIGHT ROLLERS.

No.	Diam.	Length	Sections	Weight	Water Filled	Price
WB 5	18 in.	24 in.	1	80 lbs.	310 lbs.	\$13.00
WB 7	24 in.	24 in.	1	115 lbs.	500 lbs.	17.00
WB 13	24 in.	32 in.	2	160 lbs.	650 lbs.	24.00
WB 15	24 in.	24 in.	2	140 lbs.	500 lbs.	22.00

If weights to hold handle erect are wanted add \$1.50 per roller.

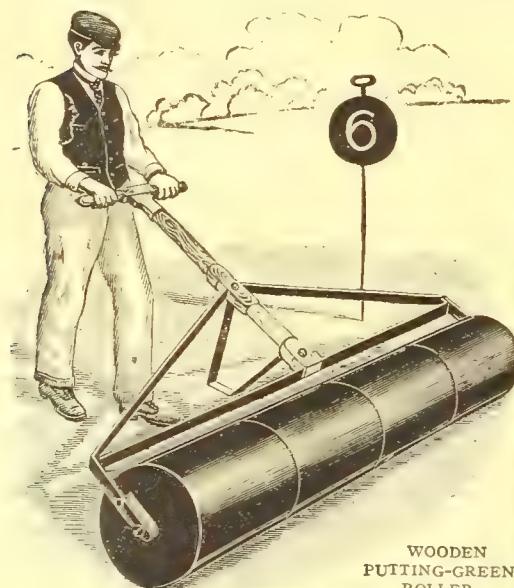


Henderson's Superior Iron Hand Rollers.

These are very superior Rollers, the edges are beveled to prevent marking, the faces are ground smooth so they will not pick up and carry lumps of earth, the axles are of steel, the sections fit closely and the handles are of our improved design, will not break and are counterbalanced so they will always roll up from the ground, clean and out of the way.

From 300 to 500 lbs. is the weight chosen for one-man power for average level lawns. Remember that the heavier the roller used on your lawn the finer sward you will have.

Weight Boxes can be supplied on any roller larger than number 3, at an extra price as quoted.



Henderson's
"Putting-Green"
Rollers.

CAST IRON
WITH SCRAPER AND
COLLECTING BOX.

convenience in handling by one man and yet effective for rolling. It turns readily without scraping the green. This roller is also very useful for firming the soil when making up vegetable garden beds both before and after seeding. Price, \$17.50

Cast Iron Putting-Green Roller With Detachable Scraper and Collecting Box.

This is undoubtedly the most efficient roller on the market for Putting Greens. The cylinder is made of cast iron in 4 ten-inch sections making the roller 40 in. wide. It is light in weight, and being in four sections is remarkably easy to handle. A new feature of this roller is that it is fitted with a scraper and collecting box for sticky worm casts—which when filled may be taken off and emptied. Thus the cylinder is being continually cleaned while the roller is being used. A man can traverse the greens with great rapidity with this roller, and can easily keep them in good condition during the soft season. This roller is also very useful for rolling garden beds after seeding. Weight, 190 lbs. Price, \$25.00.

The benefit derived from using a roller on the lawn is inestimable—and the heavier the roller the better. Freezing and thawing causes the sod-ground to heave, also too liberal watering with force washes soil from the roots of the grass—in either event, if the sod is not pressed down, the grass is apt to be burned out or injured in hot weather leaving the lawn full of bad spots. A lawn on which a roller is used is never troubled with moles.

Henderson's Wooden Putting-Green Roller.

A roller especially made to meet requirements in rolling and keeping in good condition both grass and clay "Putting Greens." It is used and endorsed by the green keepers of some of the best golf courses in the United States. The roller is four feet wide, having four 12-inch sections 10 inches in diameter made of turned rock maple the ends of each section being banded with steel to prevent splitting. The entire face surface is very true leaving

no ridges or indentations on the "green." The width is sufficient to go over the green quickly, keep it level, and the weight, 150 lbs., just right for



Lawn and Stable Barrow.



Extra Large
and
Extra Strong.

Our **Lawn and Stable Barrow** is designed for extra heavy work and has a large capacity, adapting it for manure, lawn litter, etc.; box 25 inches wide by 32 inches long by 18 inches deep. Price, \$7.00.

Wheelbarrow Leaf Rack.



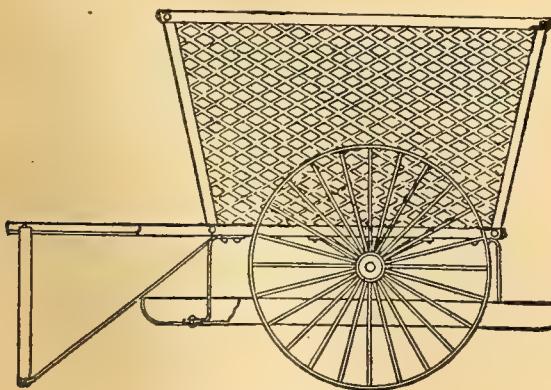
WHEELBARROW LEAF RACK.

A handy device for collecting leaves and litter. It fits on any wheelbarrow with removable sides. It is made of galvanized wire bolted to a wooden base; capacity about 10 bushels. Price, (rack only) \$5.00.

Portable Refuse Burner.

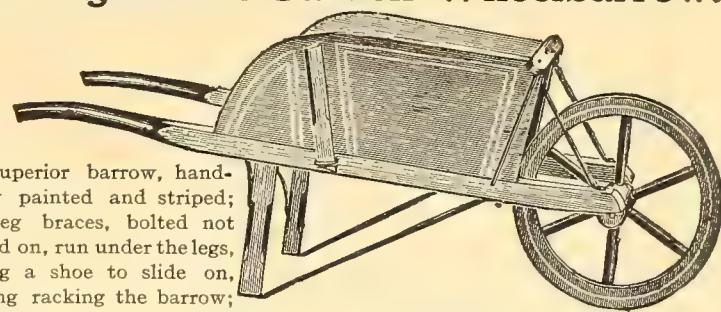
A portable steel rack for the rapid and convenient destruction of all leaves, refuse and waste matter. In reality a two-wheeled hand cart (for which purpose it can also be used) made of strong steel angle iron and heavy steel netting, which is fireproof and guaranteed not to burn out. Is fitted with broad-tired wheels, which enables it to be pulled along, with the cleaning up squad on lawns or soft ground without injury. A strong steel pan is fitted under the axle, which catches all the fire and ashes as they fall through the bottom. This pan can easily be emptied as needed. Thus the unsightly burned spots on lawns and black streaks of ashes on paths and drives is done away with and all danger of fire eliminated.

No. 1—Capacity 1 cubic yard (about 20 bushels).....	\$32.50
No. 2— " $\frac{3}{4}$ " " (" 15 ").....	24.00
No. 3— " $\frac{1}{2}$ " " (" 10 ").....	12.00



PORTRABLE REFUSE BURNER.

The Regulation Garden Wheelbarrow.

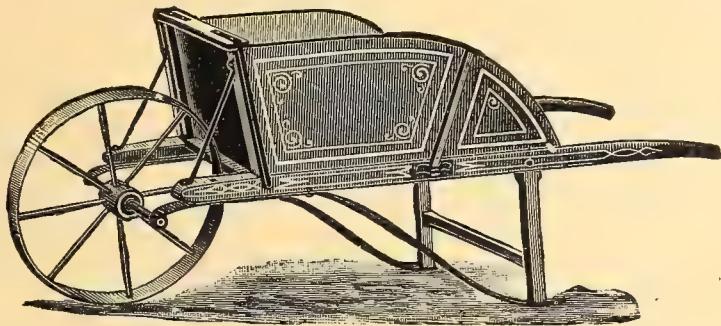


A superior barrow, handsomely painted and striped; iron leg braces, bolted not screwed on, run under the legs, forming a shoe to slide on, avoiding racking the barrow; iron bands shrunk on hubs. No pine used in these barrows.

Number	Size.	Length Box.	Width of Box.	Handle End.	Box Depth.	Diam. Wheel.	Tread	Price.
No. 2....	Boy's.....	21 in.	15 $\frac{1}{2}$ in.	18 in.	9 in.	16 in.	1 $\frac{1}{4}$ in.	\$3.50
No. 4....	Medium....	26 $\frac{1}{2}$ "	18 $\frac{1}{2}$ "	23 "	12 "	20 "	1 $\frac{1}{2}$ "	4.50
No. 5....	Large.....	28 "	20 "	24 "	12 "	22 "	1 $\frac{1}{2}$ "	5.00

The "Henderson" Barrow.

This barrow is light, strong and durable, has a steel wheel and axle and oil-tempered springs, and we do not hesitate to say that it is the best barrow on the market and as well painted, striped and varnished as a buggy. While its carrying capacity is from 300 to 500 pounds, its weight is less than 40 pounds; fully warranted to stand the roughest usage.



The tire being wide makes it more desirable for lawn and garden use and a stronger wheel for the pavements. The shoe brace, running from the rear of the body to the foot of leg, is a great protection to the leg against breakage and prevents it from sinking into soft ground.

The barrow is made of selected material, and will outlast several of the cheaper, heavy, clumsy barrows.

Weight, 50 pounds; body, 26 inches by 22 $\frac{1}{2}$ inches by 12 inches deep; diameter of wheel, 20 inches; width of tire, 1 $\frac{1}{2}$ inches.

Price, \$6.00.

Standard Rubbish Burner.



STANDARD RUBBISH BURNER.

A very convenient basket-like arrangement, durably made of galvanized wire with heavy iron supports, for the disposal of leaves, rubbish, papers, etc., in the open air. Made in two sizes.

Price, Small size, 15 in. dia. 24 in high....

\$3.50

Large size, 20 in. dia., 35 in. high...

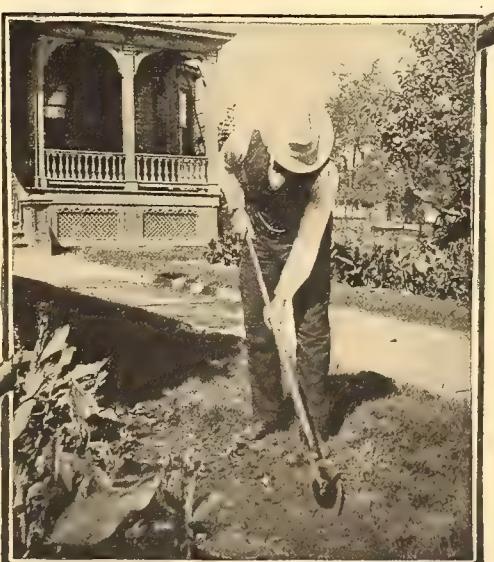
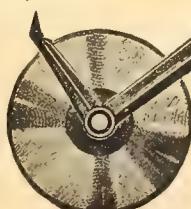
6.50

Revolving Sod Trimmer or Border Cutter.

A splendid tool for trimming the turf around the edges of walks and flower beds. A revolving knife enables the work to be done with rapidity. Price, \$1.75.

To Operate the Revolving Sod Trimmer

The forward hand holding the tool, should rest against the forward leg just above the knee and the knee should assist in pushing the trimmer (as is sometimes done in shoveling earth); this prevents the knife from cutting in too deep.



REVOLVING BORDER TRIMMER.

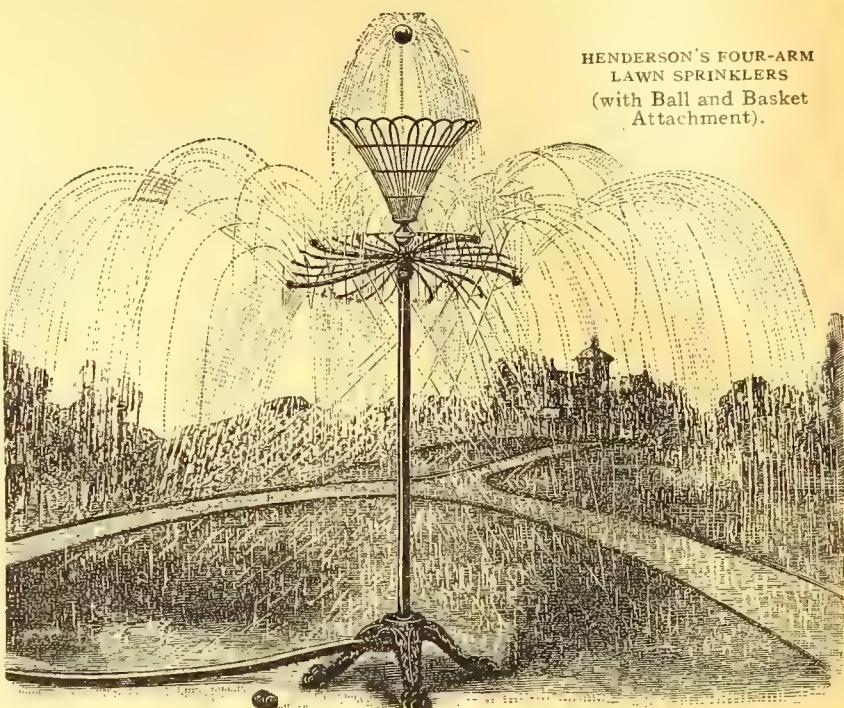
Lawn Sprinklers

Lawns need an abundance of water to enable their rich luxuriance to be maintained during hot dry weather. If the soil was originally prepared very deeply to induce deep root action, the necessity for artificial watering is less pronounced, but lawns intelligently laid down in this manner are in the minority in this country. It is therefore advisable on lawns with the average thin turf to water or "sprinkle" frequently. In such cases a good lawn sprinkler is a necessary adjunct, being far superior to a hose nozzle. The latter usually throws too strong a stream, eventually washing the earth from the grass roots leaving them exposed to the injurious effects of the hot sun thus causing the grass to burn up. With a lawn sprinkler the same flow of water is broken up and uniformly distributed over a large area in the form of fine gentle rain, thoroughly saturating the ground covered without any injurious washing.



Campbell Automatic Sprinkler

is constructed of brass, with the exception of the ball-bearings which are bell metal and bronze. The machine has two discharge tubes, and the water being forced under pressure from the stand pipe through the sprinkler, is projected a great distance, the machine being revolved by the reaction of the atmosphere against the stream, which in emerging from the small tube, is broken up and evenly distributed at a considerable distance from the stand pipe, in a circle of 50 to 60 feet in diameter. (See engraving.) Price, \$3.50.



HENDERSON'S FOUR-ARM LAWN SPRINKLERS
(with Ball and Basket Attachment).

Henderson's 4-Arm and 8-Arm Lawn Sprinklers

This is the best lawn sprinkler made. It can be attached to hose and placed anywhere on the lawn, where it serves the double purpose of a beautiful fountain and of thoroughly saturating the grass or garden. The water is distributed fine and in drops over an area of 60 to 100 feet in circumference, according to the water pressure. An ornamental stand, about four feet high, is surmounted with long perforated arms, which revolve, so the beautiful sprays are constantly changing.

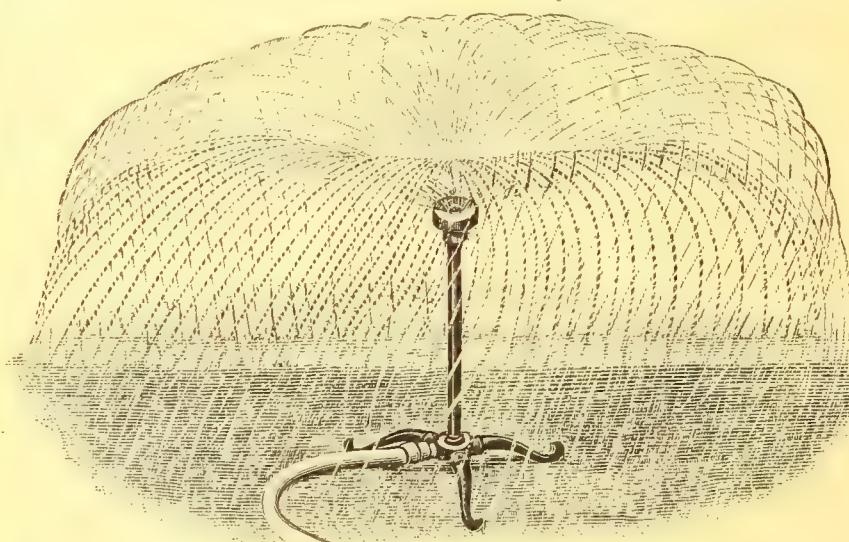
Prices, 4-arm sprinkler, \$3.50; 8-arm, \$4.00.

BALL and BASKET. This fits on top of the Henderson sprinkler, and the stream of water keeps the silvered ball dancing on its summit up in the air. When the ball falls the basket catches it, and it rolls into the centre and is again raised by the water.

Price, \$3.50 extra.

The "Shower" Lawn Sprinkler.

One of the most satisfactory lawn sprinklers we offer. It is very simple—no parts to revolve, squeak, clog, wear or get out of order. No arms to break off. It is a round box-like affair—about 3 inches in diameter by 1 in. in depth with a turbine arrangement inside which gives the water passing through a swirl causing it to pass through the single opening and be distributed over a circular area 25 feet or more in diameter according to the water pressure. The water descends evenly from center to circumference in the form of fine rain. Price, on stand \$2.75 (mail weight 4 lb.); without stand, to be used as a nozzle, \$1.25 (mail weight 1 lb.).



THE "SHOWER" LAWN SPRINKLER.

The Skinner "Lawn Mist" Irrigator.

This is virtually the famous "Skinner Irrigation System" on wheels and is therefore portable and may be placed and moved any where on the lawn or in the garden where it can be connected to the garden hose. Its advantages are that it waters a large area with but little attention and the water is distributed evenly and gently in a fine spray which does not pack nor crust the ground nor wash soil from the roots of grass or plants, besides the chill is taken off the water for the minute drops absorb warmth from the air before descending and also cool the atmosphere. The refreshing effect on a sultry night being most noticeable. The Skinner Lawn Mist Irrigator is a length of galvanized pipe in which are fitted about every three feet apart, clusters of small spray nozzles so arranged that the distribution of water is entirely uniform the entire length of the pipe—and over a width of from 16 to 20 feet according to the volume and pressure of the water supply. A 12 foot section of pipe is fitted to 4 sets of nozzles, a 15 foot section to 5 sets and an 18 foot section to 6 sets of spraying nozzles. A 15 foot length operating under a 30 lb. pressure will distribute about 5 gallons of water per minute, other lengths in proportion. Where the water supply and pressure is sufficient two or more lengths of pipe may be connected and operated at one time and if the extra lengths are fitted with our "flexible couplings" the pipes may be placed at different angles as may be desirable. The Skinner "Lawn Mist" Irrigator works best with a water pressure of 30 lbs. or more though very satisfactory results are given with pressures as low as 20 lbs. Each section is fitted to a neat 2-wheel truck at one end and a shoe runner at the opposite end. Coupled for $\frac{1}{4}$ hose.

Price, per 12 foot section, \$12.00; 15 ft. section, \$13.50; 18 foot section, \$15.00. Flexible coupling to connect two sections, 75c. each.





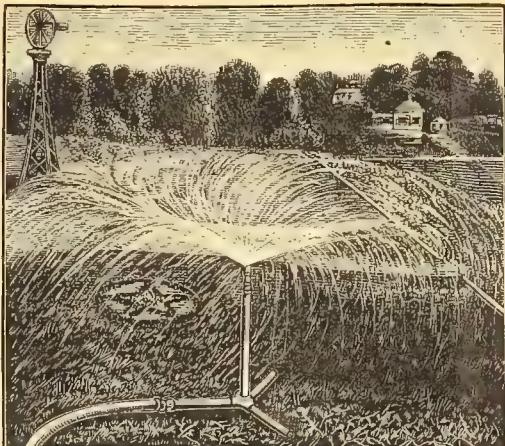
WATER WITCH LAWN SPRINKLER ON SPUR.

"Water Witch" Lawn Sprinklers.

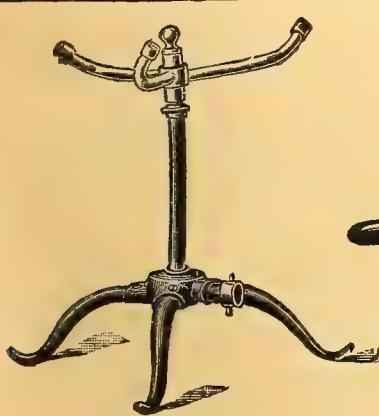
An effective device for sprinkling lawns, gardens or flower beds. The water flows with unimpeded force, and is divided and deflected by the two lips of the swivel piece, which it causes to revolve rapidly, scattering the water in fine drops and evenly over a circular area of 25 to 40 feet diameter. It works more satisfactorily with a very low pressure of water than any sprinkler we know of.

Price, without stand (*i. e.*, with spur to stick in the ground (see cut). 50c. each, P. P. 1 lb.

Price, with stand, \$1.20 each, P. P. 3 lb.



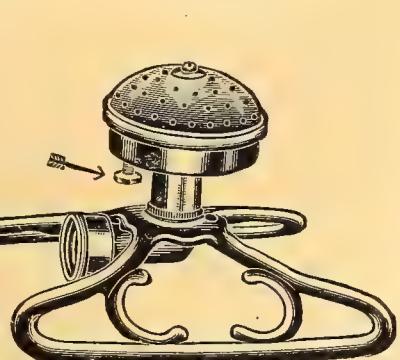
WATER WITCH LAWN SPRINKLER ON STAND.



"Columbia" Three-Arm Lawn Sprinkler.

This fills the want for a low-priced arm Sprinkler; it is compactly and strongly made with phosphor-bronze bearing and will cover a space 48 feet in diameter with suitable pressure of water. The top and arms are brass, stand and legs of iron handsomely japanned. The water flows freely through an unobstructed channel, so there is no clogging—it stands 12 inches high.

Price, \$1.60 P. P. 3 lb.



The Sunset Sprinkler.

Does the work of two sprinklers. When the little thumb nut is screwed up the Sunset covers a perfect half circle, enabling the user to give his lawn a thorough drenching right up to the edge of the sidewalk without wetting the walk itself. When the little thumb nut is screwed down the Sunset sprinkles a full circle, gently but thoroughly, covering an area 25, 30, or 35 ft. in diameter, depending on the water pressure. It can be easily dragged around the lawn without tipping.

Price, \$1.35. P. P. 3 lb.

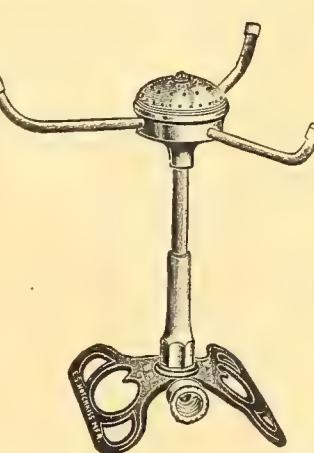


The Ring Lawn Sprinkler.

The simplest lawn sprinkler made—on revolving parts to wear and get out of order or leak. Easily moved about the lawn—made of polished brass—light, durable and economical. Price, 75c. P. P. 1 lb.

Henderson's "Siamese" Lawn Sprinkler Attachment.

By using these, several sprinklers can be used at one time providing the pressure and volume of water are sufficient. A $\frac{3}{4}$ -in. hose and 30 to 40 lb. pressure will operate 3 sprinklers; a 40 to 50 lb. pressure, 4 sprinklers; with 1-inch hose and a good pressure, 6 sprinklers can be operated satisfactorily. This method of watering is valuable for thoroughly saturating large areas of lawn or garden. Price, for $\frac{3}{4}$ in. hose, 75c., P. P. 1 lb.; for 1-in. hose, \$1.00. P. P. 1 lb.



Universal Lawn Sprinkler and Fountain.

This Combination Lawn Sprinkler and Fountain when in operation on the lawn is very attractive. The nickel plated arms revolve distributing the water in rain like drops over an area of 25 feet or more in diameter according to the water pressure. In addition to this the central oval spray cover causes some of the water to be thrown up forming a beautiful umbrella shaped fountain.

Price, \$2.75 each. P. P. 4 lb.

The Campbell Portable Oscillating Irrigator.

This Irrigator is made in two lengths, 8 and 14 feet. The distributing pipe is self-oscillating throwing the water and breaking it into a fine spray on both sides and evenly distributing over a strip 50 to 70 feet long according to the water pressure—20 to 40 lbs.—and the width of the machine. It may be adjusted to throw water either on one or both sides as desired.

These oscillating irrigators are light—the 8-foot machine weighing only about 30 lbs. and therefore are easily moved from place to place on the curved skids, wheels not being needed.

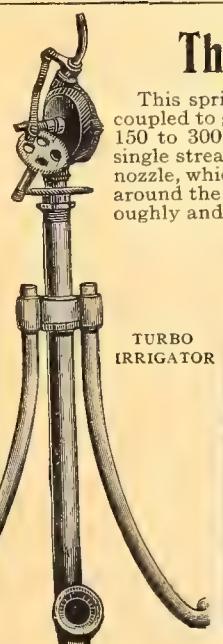
For watering lawns and gardens it is unexcelled.

Couplings fitted for $\frac{3}{4}$ inch hose.

Price, 8-foot machine, \$16.50; 14-foot machine, \$28.00;



CAMPBELL OSCILLATING IRRIGATOR.



The Turbo Irrigator. For Lawns, Gardens, Golf Greens, Etc.

This sprinkler, mounted on its tripod, may be placed anywhere and coupled to garden hose will water an area 25 to 50 feet from the center or 150 to 300 feet in circumference, according to the water pressure. A single stream, broken into a rain of drops and spray is thrown from the nozzle, which the mechanism causes to rise and fall as it is slowly revolved around the machine, so that every portion of the ground covered is thoroughly and evenly watered from center to circumference. Price, \$15.00.



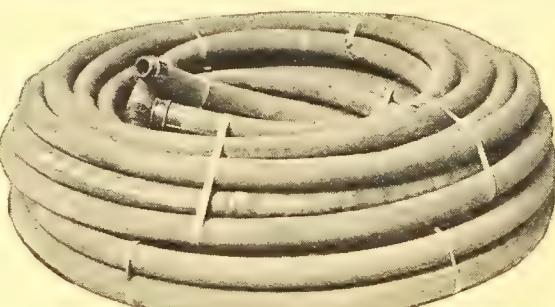
TURBO IRRIGATOR IN OPERATION.

Henderson's "Best Para" Rubber Hose.

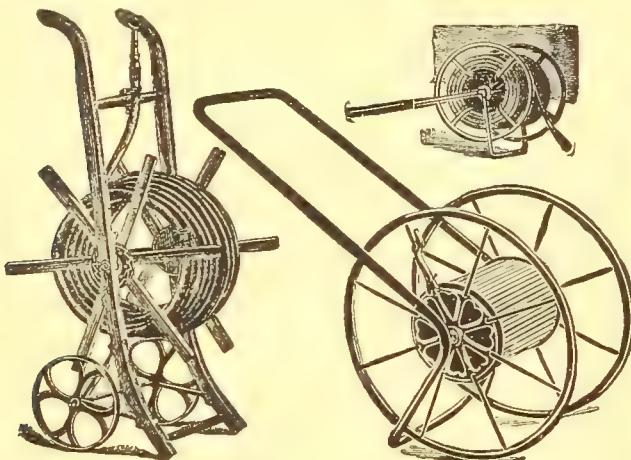
This is the highest grade of garden hose, being made entirely from New Para Rubber, and will outlast cheap hose three times over. We guarantee it to stand a 300-pound water pressure, and it will be as resilient in three or four years time as when new, while cheap hose of that age will be hard and rotten. Every length of Henderson's "Best Para" Hose is fitted with the new watertight couplings, without extra charge.

(Hose is furnished only in 25-feet and 50-feet lengths; the sizes $\frac{3}{4}$ and 1 inch refer to the internal diameter of the bore.)

$\frac{3}{4}$ -inch bore Para, per 25-foot length, \$4.75; per 50-foot length, \$9.00. 1-inch bore Para, per 25-foot length, \$7.00; per 50-foot length, \$13.00



HENDERSON'S "BEST PARA" HOSE.



BENT LEG HOSE REEL.

ALL IRON HOSE REEL.

ALL IRON HOSE REEL.

Note position of reeling and unreeling hose. The All Iron Hose Reels are constructed entirely of iron, and are indestructible; light in weight, frictionless, and the wheels being high make it easily manipulated; these reels cannot tip over when unreeling and there is no weight of hose to carry on the handle.

No. 10, 21-in. holds 100 ft. $\frac{3}{4}$ -in. hose \$3.60
 No. 20, 24 " 150 " $\frac{3}{4}$ " 3.85
 No. 30, 30 " 500 " $\frac{3}{4}$ " 5.75

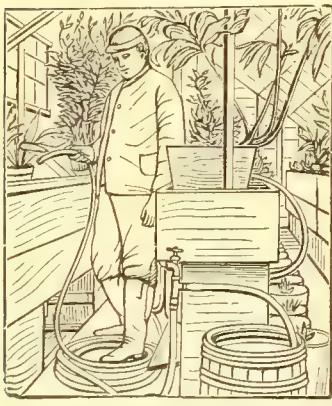
BENT LEG HOSE REEL.

The best wooden reel made—not easily tipped over. The ratchet prevents unwinding unless it is desired to throw back the clutch. It holds from 100 to 150 feet of $\frac{3}{4}$ in. hose. Price, \$2.75.

SIMPLEX HOSE REEL.

A stationary reel to be attached to wall or side of a building or fence in any convenient place. Just the thing for small gardens where a portable reel is in the way, and where only 25 to 50 feet of hose is used. The smallest diameter of the arms is 12 inches, and when filled with 50 ft. of $\frac{3}{4}$ in. hose, the outside diameter is about 22 inches. The Simplex reel is shipped "knocked down" with all necessary parts and screws to put together and fasten up. Mail weight 6 lbs. Price, \$1.75.

THE KINNEY LIQUID MANURE PUMP.



THE KINNEY PUMP.

For applying liquid manure this pump has no equal. Enough labor is often saved in feeding a house of plants once to pay for the pump. The water pressure does the pumping. Being made entirely of brass and nickel plated, these pumps are not corroded by chemicals and they do not wear out.

It will apply from 5 to 15 gallons of liquid fertilizer a minute. There is no waste. You screw the pump to the faucet, put the end of the suction hose into a barrel or tank of clear liquid manure attach the three-fourths inch discharge hose, open the faucet and go the end of the hose. The liquid manure follows, and will keep coming as long as you want it, or until the supply in the barrel or tank is exhausted—provided the liquid manure is reasonably free from coarse matter which would clog the pump. The Kinney Pump weighs only 15 ounces. Price, \$2.00, mail weight 1 lb.

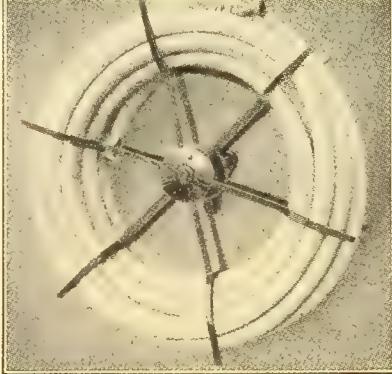
"Standard Quality" Rubber Hose.

This is a grade that is often sold as the "best." It is a good hose and will stand a 100-pound pressure. Each length is fitted with the regular couplings, without extra charge. For $\frac{3}{4}$ -inch Spray Pump Hose and Tubing see below.

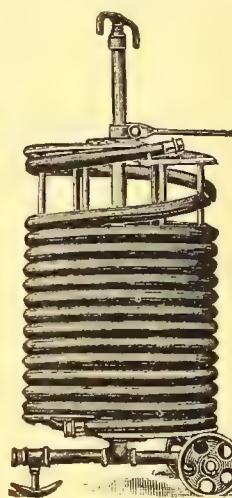
$\frac{3}{4}$ -inch Standard, per 25-foot length, \$3.50; per 50-foot length, \$6.50.
 1-inch Standard, per 25-foot length, \$5.00; per 50-foot length, \$9.50.

Spray Pump Discharge Hose.

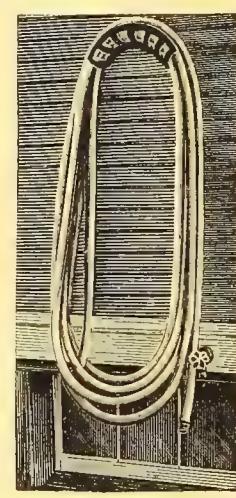
Cut any length, 10 ft. up to 50 ft. $\frac{3}{4}$ inch bore, 12c. per foot (coupling extra 25c. set). $\frac{3}{4}$ inch red tubing 12c. per foot, cut any length, 3 to 50 foot Couplings extra, 20 cents per set.



SIMPLEX HOSE REEL.



HOSE DRAINING REEL.



HOSE HANGER.

HOSE DRAINING REEL and LAWN SPRINKLER.

The life of hose is considerably lengthened when regularly and thoroughly drained. On this new reel hose may be wound in gradually ascending coils so that it naturally self-drains when placed in the vertical position shown in the illustration, though when reeling and unreeling the hose the truck is placed in a horizontal position.

This reel is also equipped with a splendid lawn sprinkler head, rendering it doubly useful.

Price, No. 1, for 50 ft., $\frac{3}{4}$ -inch hose, \$4.50. No. 2, for 100-ft., $\frac{3}{4}$ -inch hose, \$5.00.

"HOLE-PROOF" HOSE HANGERS.

"Hole-Proof Hose Hangers" drain, dry and protect your hose when in use; preserve it when stored; insure it against holes, cracks and checks, and double its life and usefulness.

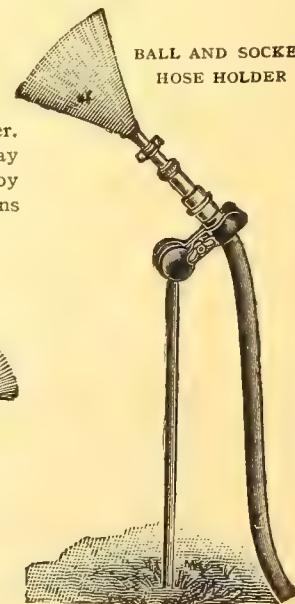
Compact, convenient and inexpensive. Carries 100 ft. hose, 75c., mail weight 5 lb.

BALL AND SOCKET HOSE HOLDER.

A most practical and efficient hose holder. It may be stuck anywhere and the nozzle may be pointed in any direction or at any angle, by simply operating one thumb screw, which fastens the ball and socket joint.

Price, 75c. Mail weight 4 lb.

BALL AND SOCKET HOSE HOLDER

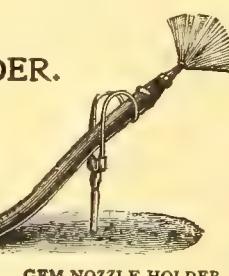


GEM NOZZLE HOLDER.

For watering lawns and flower beds.

The hose is held firmly and can be adjusted to any elevation in an instant.

25c. each. Mail weight 1 lb.



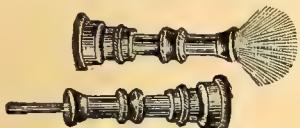
GEM NOZZLE HOLDER.

BRASS HOSE NOZZLE.



With stop-cock, spray rose and stream. Prices, $\frac{3}{4}$ inch hose, \$1.25 for 1 in., \$1.50 P.P. 1 lb.

THE "GRADUATING" SPRAY NOZZLE.



Will throw a coarse or a fine spray or a solid stream. Price, $\frac{3}{4}$ inch, 65c.; 1 inch, 95c. P.P. 1 lb.

FLORISTS' AND GARDENERS' HOSE SPRINKLER.



A wide face nozzle. The holes are small and numerous so that a copious yet gentle shower is given without washing or packing the soil. Price, for $\frac{3}{4}$ inch hose, 3 inch face, 95c.; 4 inch face \$1.25. P.P. 1 lb.

CALDWELL'S HOSE STRAP.



The best device for attaching hose couplings. Hose straps for $\frac{1}{2}$ inch hose, 20c. doz.; P.P. 4 oz. $\frac{3}{4}$ in. hose, 25c. doz.; P.P. $\frac{1}{2}$ lb. 1 inch hose, 30c. doz.; P.P. 1 lb. Pliers 20c. P.P. 1 lb.

HUDSON'S HOSE MENDER.

Practical, simple, perfect. Box of 6 tubes, 20 bands and pliers, 85c. P.P. 1 lb. (Give size of hose). Tubes, $\frac{3}{4}$ inch, 4c.; 1 inch, 5c. each; Band, 25c. per doz.; Pliers, 35c., P.P. 1 lb.

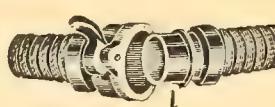


BULL DOG HOSE CLAMP.



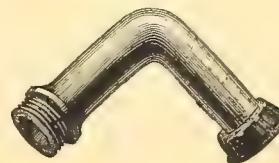
The best device for attaching hose couplings, hose straps for $\frac{1}{2}$ inch hose, 50c. doz., P.P. 1 lb.; $\frac{3}{4}$ inch hose, 60c. doz., P.P. 2 lb.; 1 inch hose, \$1.00 doz., P.P. 2 lb.

LIGHTNING HOSE COUPLER



Instantly attached or disconnected; no twisting of the hose, no bruising fingers, watertight. (State if wanted to replace old couplings or to be attached to them.) Price, per set two pieces, $\frac{3}{4}$ inch, 50c. P.P. 1 lb. \$5.50 per doz. P.P. 7 lb.

HYDRANT SWIVEL.



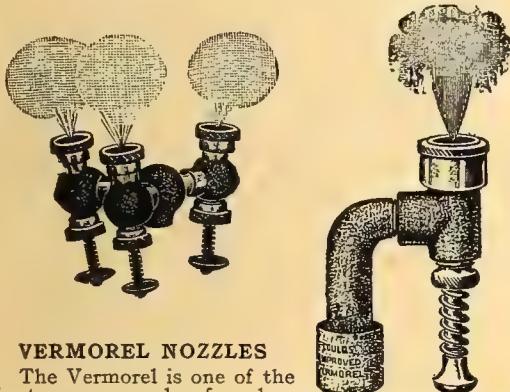
Turns in any position, prevents hose from kinking. For $\frac{3}{4}$ inch hose. 85c. each. P.P. 1 lb.

HOSE REDUCER.



For connecting hose of 1 inch bore with $\frac{3}{4}$ inch (mailed free), 35c.

Spraying Requisites



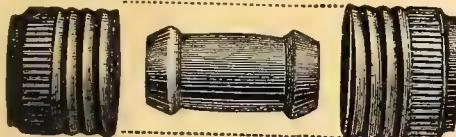
VERMOREL NOZZLES

The Vermorel is one of the best spray nozzles for close range. The screw cap is easily removed when necessary. Easily cleaned by pressing the degorgor. Single spray, 90c.; P.P. 8 oz. Double spray, \$1.75. P.P. 14 oz. Triple spray, \$2.50. P.P. 1 lb.



THE COOPER BRASS HOSE MENDER.

Made of thin brass tubing; will not rust or wear out; scarcely decreases the flow of water; easily applied by any one; simply cut out your bad piece of hose and force the ends of the good hose over the mender until they meet in the centre. No other fastening is required; the bars will hold it and it will not leak. Price, for hose with $\frac{1}{2}$ -inch bore, 8c. each, 85c. doz., P.P. 1 lb.; for hose with $\frac{3}{4}$ -inch bore, 9c. each, 95c. doz., P.P. 1 lb.; for hose with 1-inch bore, 10c. each, \$1.00 doz., P.P. 2 lb.



THE SURE SHUT HOSE MENDER.

The simplest, strongest and best device on the market for repairing leaky hose. No tools necessary to attach it. Makes an absolute water tight connection. Made entirely of brass and will not rust.

Price, for $\frac{3}{4}$ inch hose, 15 cents each, \$1.60 per dozen, P.P. 2 lb.

BORDEAUX NOZZLE



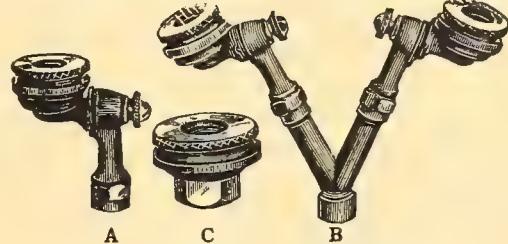
Spray and Stream.

A combination spraying, sprinkling or solid stream. It throws solid stream or fan-shaped spray adjustable to any fineness; is readily degorged by turning the cock handle. It will also throw a long distance coarse spray for spraying very large trees; or it may be shut off altogether. Price, for either $\frac{1}{4}$ inch pipe or $\frac{1}{2}$ or $\frac{3}{4}$ inch hose, 90c. P.P. 5 oz.

THE "STOTT" SPRAY NOZZLE.



Gives a spray as fine as mist. Very economical of fluid. It cannot choke or get out of order. Price, single spray for $\frac{3}{4}$ inch connection, \$1.35; Double spray, $\frac{3}{4}$ inch, \$1.85. P.P. 1 lb.



THE "MISTRY" SPRAY NOZZLE

Will cover a greater surface with a finer mist like spray, and with less solution than any other nozzle. Made of brass with a removable steel disc in the discharge cap.

"Mistry" Nozzle (Fig. A), with swivel adjustment to spray at any angle. For $\frac{1}{4}$ inch pipe, \$1.60; for hose connection, \$1.85. P.P. 1 lb.

Twin "Mistry" Nozzle (Fig. B), two of the above attached to a brass "Y" adjusts to spray in any direction \$3.50. P.P. 2 lb.

Mistry, Jr., Nozzle (Fig. C), similar to Fig. A but without swivel adjustment. Two steel discs come with each nozzle, one for a coarse and one for a fine spray. Never clogs. No extensions to catch in the trees. Will do the work of two ordinary nozzles. For $\frac{1}{4}$ inch pipe, 90c.; for hose connection, \$1.15; P.P. 5 oz. Extra discs, 60c. doz.

BAMBOO EXTENSION ROD.



Bamboo Extension Rod. Fitted with non-corrosive tube $\frac{1}{4}$ inch diam. inside, with brass stop cock and drip guard. Price, 10 ft. long, \$3.50; 12 ft. long, \$4.00.

Iron Extension Rod. 8 feet long with stop cock. Galvanized, \$1.75. For hose add 25c. for attachment No. 2.

No. 3. Pole Connection so hose may be elevated where extension rods are not used, 25c. P.P. 6 oz.

No. 2. Connection for $\frac{1}{2}$ or $\frac{3}{4}$ inch hose and $\frac{1}{4}$ inch threaded pipe or nozzle, 25c. P.P. 4 oz.

No. 1. Brass "L" for under spraying threaded $\frac{1}{4}$ inch of pipe and nozzle, 25c. P.P. 4 oz.

No. 4. Brass Stop Cock to shut off flow and save waste while changing position of nozzle. $\frac{1}{4}$ inch female thread both ends, 65c. or with male thread attachment at one end, \$1.00. P.P. 4 oz.

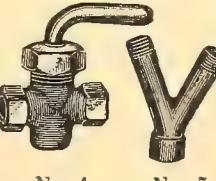
No. 5. Brass "Y" for connecting two spray nozzles, base tapped to fit $\frac{1}{4}$ inch pipe, 60c., or with No. 2 hose connection 85c. P.P. 1 lb.

No. 6. Funnel and Strainer for spraying mixtures. Strainer 9 inch diameter, 10 inch deep, \$1.50.

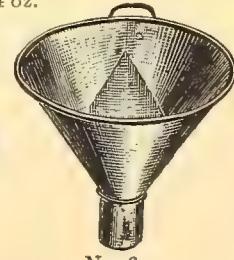
For spray hose see page 47.



No. 1. No. 2. No. 3.



No. 4. No. 5.



No. 6.

SPRAY PUMP DISCHARGE HOSE.

Cut any length, 10 ft. up to 50 ft. $\frac{1}{2}$ -inch bore, 12c. per foot (couplings extra, 25c. set).



Self-Watering Iron Window Boxes.

These are made of sheet iron, galvanized and finished on the outside in green enamel. They are very durable, rust proof and positively will not leak.

The crowning merit of these boxes, however, is the self-watering feature. This is accomplished by a false bottom below which the water is contained, it being poured in through a tube in the corner that projects from the rim to the bottom. The false bottom has holes in it in which are inserted small sponges. These absorb the water and it is drawn up by the Soil or Fibre keeping it evenly moist for a week or more before the water requires replenishing, thus the plants do not dry out from neglect and thrive and bloom with unusual luxuriance.

No.	Height	Width	Length	Water Capacity	Price Plain	Price Ornamental
1	8 ins.	9½ ins.	23 ins	2½ qts.	\$2.00	\$2.75
4	8 "	9½ "	29 "	4 "	2.50	3.50
7	8 "	9½ "	35 "	5½ "	3.00	4.25
10	8 "	9½ "	41 "	7 "	3.50	5.00

Note:—The "Plain" self-watering Window Boxes have a smooth surface, enameled green; the "Ornamental" have a design pressed in the metal which, as illustrated, greatly improves the effect.



Rustic Hanging Baskets.

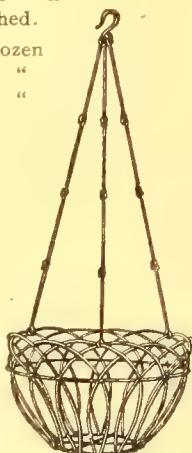
Hexagon shaped bowls covered with laurel roots finished natural color and varnished.

10 inch. \$1.75 each. \$15.00 per dozen
12 " 2.00 " 20.00 "
15 " 2.50 " 25.00 "

Wire Hanging Baskets.

Green and bronze finish, strong and well made. Just the thing for decorating piazzas of summer hotels and suburban residences.

No. 4, 8 in. diam., 25c. ea.
\$2.50 doz. No. 5, 10 in. diam.,
30c. ea. \$3.00 doz. 12 inch,
35c. ea. \$3.50 doz.



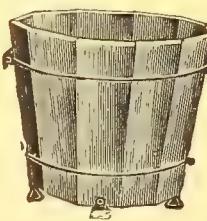
Cedar Plant Tubs.

Heavy iron hoops. Drop handles, serving as hooks for carrying poles. Iron legs. Removable perforated bottoms. Painted green outside and brown inside. Painted red, if desired, at an extra cost of 10 per cent.



Outside	Length		
No. Diam.	of Stave	Price.	
0 27 ins.	24 ins.	\$7.00	
1 25 "	22 "	6.00	
2 23 "	20 "	5.50	
3 21 "	18 "	5.00	
4 18 "	16 "	4.50	
5 16 "	14 "	3.75	
6 14 "	12 "	3.25	
7 13 "	11 "	3.00	
8 12 "	10 "	2.50	

"Columbia" Plant Tubs.



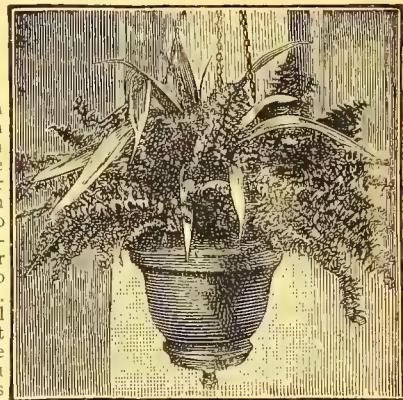
No.	Diameter.	Height.	Each.
D	21 ins.	18 ins.	3.00
E	24 "	20 "	3.50

Self-Watering Iron Hanging Pots.

The ordinary hanging baskets are usually an abomination when it comes to watering them on account of the drip, in consequence they are often allowed to "dry out" to the detriment of the plants. The Self-Watering Hanging Pots "never leak a drop" and plants thrive in them grown in either Soil or Fibre, do not need water often. To water the plants simply remove the lower reservoir—a partial turn will do it—fill it with water and replace. The Soil or Fibre will soon absorb the needed moisture through a connecting sponge.

Our prices do not include chain. We will supply a solid brass chain for this purpose at 3c. per foot. In ordering chain, measure the distance from point of suspension to where you want the top of basket and order three times that amount.

No. A. Diameter, 9 inches; Water Capacity, 2 pints. Price.....	\$3.00
No. B. Diameter, 10 inches; Water Capacity, 2 pints. Price.....	3.50
No. C. Diameter, 12 inches; Water Capacity, 3 pints. Price.....	4.50



Rolling Stands for Heavy Plants.



The device consists of two steel pieces securely riveted and equipped with casters (see illustration), a strong and compact support for plants, in large pots or tubs.

Prices (including Fibre Saucers).

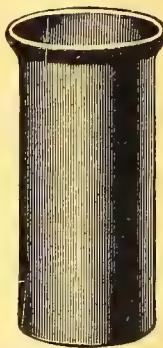
No. 12—12 ins. diam., takes 10-in. tub.....	\$.85
" 14—14 " " " 11 " "	1.00
" 16—16 " " " 13 " "	1.25
" 18—18 " " " 15 " "	1.50
" 20—20 " " " 17 " "	1.75
" 22—22 " " " 20 " "	2.15

Flower Vases, Waterproof Fibre Ware.

Do not rust nor leak, not easily broken. Mahogany finish but can be enameled any color by purchaser, inside dimensions are given.

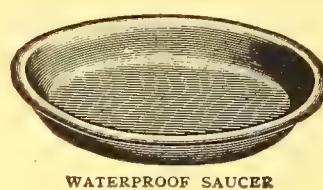
No.	Depth	Diameter	Each	Doz.
0.....	13 in.	8 in.	95c.	\$9.50
1.....	10 "	5½ "	85c.	8.50
2.....	9 "	4½ "	75c.	7.50
3.....	6½ "	4 "	65c.	6.50
4.....	4½ "	3 "	60c.	5.75

(Prices of larger sizes on application).



Waterproof Fibre Saucers for Flower Pots.

Are not porous and therefore do not absorb moisture and spoil woodwork tables, etc., on which plants stand. Not breakable. Color, terra cotta brown.



(Measurements given are the outside diameters.)

Inch	Each.	Doz.	Inch.	Each.
5	18c.	1.95	10	26c.
6	19c.	2.10	12	35c.
7	20c.	2.20	14	45c.
8	22c.	2.40	16	75c.
9	24c.	2.60	18	85c.

WATERPROOF SAUCER

Oak Jardiniere.

In these goods, the oak is selected to show the quartered grain, stained dark and finished with lustre surface. The hoops and handles are of brass, highly polished and lacquered. Inside of tubs painted a rich dark red. High form for

Inside	Top	Inside	Standard Flower Pots. Low Form for Bulb and Fern Pans.
No.	Diam.	Depth	Price
75	7	4½	\$2.75
77	7	6½	3.20
85	8	5½	3.30
88	8	7½	3.60
96	9½	5½	3.85
99	9½	9	4.25
119	11	9	4.25
1111	11	11	5.00
1212	12	12	7.00
1414	14	14	8.50





Japanese Bamboo Stakes.

Imported bamboo stakes very strong and durable.

Length	Per 100	Per 1000
3 foot, Dyed Green	\$0.90	\$8.00
4 " " "	1.20	10.00
5 " " "	1.40	12.00
6 " Natural Color	1.25	10.00
8 " " "	1.75	15.00
10 " " "	3.00	28.00

WOOD PLANT STAKES.

Stakes—Round Green Tapering			Square Green Tapering			Round Dahlia Poles Green, White Tops.		
Length	Doz.	100	Doz.	100	Length	Doz.	100	
2 feet.....	\$0.35	\$2.25	\$0.30	\$2.00	2 feet.....	\$0.50	\$3.50	
3 ".....	.60	4.75	.60	4.75	3 "	.75	5.00	
4 ".....	.95	7.50	.90	6.50	4 "	1.00	7.00	
5 ".....	1.25	9.00	1.25	8.50	5 "	1.25	9.00	
6 ".....	2.25	15.00	1.50	11.00	6 "	1.50	11.00	

Wooden Garden Trellis for Roses and Vines.

These are well made of wood and painted dark green.

Veranda Trellis, 6ft. x 18 in. \$1.25 each; 8 ft. x 18 in. \$1.75 each; 10 ft x 20 in \$2.35 each; 12ft. x 20 in. \$3.00 each.

" " Extra Wide 6 ft. x 28 in. \$2.00 each; 8 ft. x 28 in. \$2.75 each; 10 ft. x 31 in. \$3.50 each; 12ft. x 36 in. \$4.25 each.

Fan Trellis, 4 ft. x 27 in. wide at top 90c. each; 6 ft. x 38 in wide at top \$1.25; 8 ft. x 46 in. wide at top \$1.75.

Lattice Trellis, 6 ft. x 18 in. \$1.25; 8 ft. x 18 in. \$1.75; 10 ft. x 18 in. \$2.35; 12 ft. x 18 in. \$3.00 each.

Enamelled Iron Everlasting Signs.

• NO TRESPASSING •

and

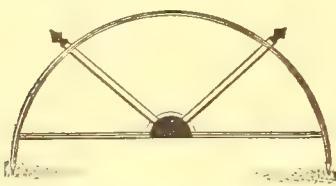
KEEP OFF THE GRASS

"Keep off the Grass"

Name plate of iron; enamelled green with white letters; size 20 in. long by 4 in. wide iron rod 26 in. long. Will last years. Price, \$1.50 ea.; \$15.00 per doz.

"No Trespassing."

Iron enamelled blue, white letters. Sign 20x4 in., four screw holes for attaching to fence, trees etc.; no rod. Price, \$1.25 each \$13.50 doz.

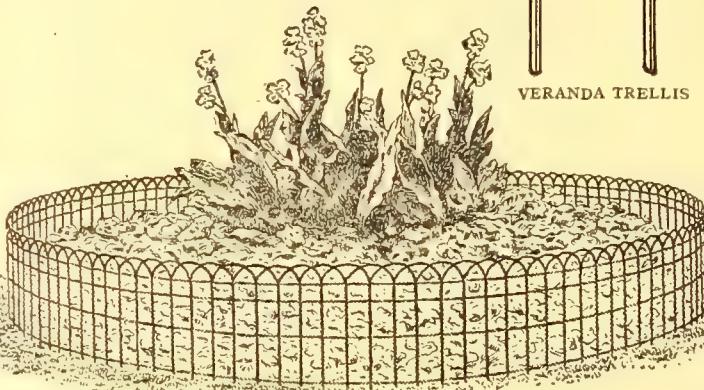


IRON LAWN GUARD.

WROUGHT IRON LAWN GUARD

Prevents people walking over corners of lawns. Made of wrought iron, painted green, very durable, 28 in. high, and 3 ft. wide.

Price, \$2.00 each.



CYCLONE FLOWER BED AND LAWN GUARD.

This guard is made of heavy galvanized wire, having the pickets extended about four inches below the lower cable for holding the same in the ground, and is made to stand 12 to 18 inches in height when set in place. Full rolls contain 165 feet, but cut lengths will be supplied when desired.

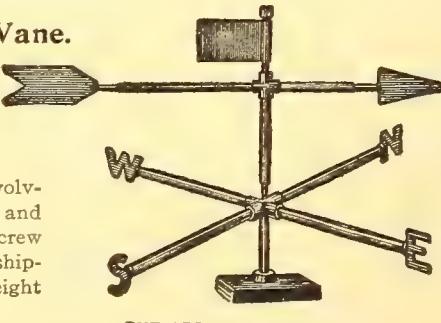
Price, per lineal foot 16 inches in height.....12c.
22 inches in height.....15c.

The Arrow Weather Vane.

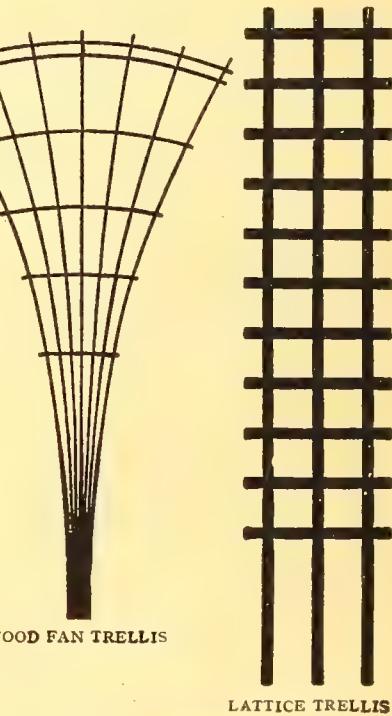
Durably made of iron, enamelled black and ornamental in red and aluminum, can be fastened to pole or roof.

Height 15 inches, length of revolving arrow 23 in.; arms (N. S. E. and W.) each 8 in. long. All parts unscrew and pack in small compass for shipment. Net weight 3 1/2 lb., P.P. weight 4 lbs.

Price, \$2.50 each.

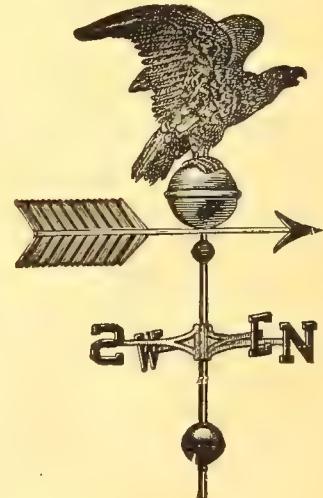


THE ARROW WEATHER VANE



WOOD FAN TRELLIS

LATTICE TRELLIS



Copper Weather Vanes.

The vanes are made entirely of copper and brass, and the points of compass are of cast iron. The upright rods or spires are of wrought iron with steel spindles on which the vanes revolve. All parts are well painted, revolving sections, balls and letters, points of compass are gilded with 22 karat gold leaf. We can supply various designs. Horse, Automobile, Arrow, Cow, Deer, Dog, Eagle and Rooster in various sizes, varying from \$6.00 and upward each. Special Circular mailed on application.



Auto Compressed Air Sprayer No. 1.

For Spraying Liquid Insecticides and Fungicides on Garden or Green House Plants, Shrubs, Trees, Etc. Also Whitewash and Disinfectants to Poultry Houses. Also Applies Fly Oils for Animal Protection.

The Auto-Spray No. 1 is the standard of all compressed air sprayers, and is in greater demand than all other similar machines combined. It is exceptionally strong and entirely practical. No other compressed air sprayer will do such a variety of work and do it so well. Can be used in every variety of spraying. Suitable for all garden work, five acres of field crops, a limited number of trees any size, also will handle whitewash and disinfectants in the Poultry House, and handling disinfectants, for sheep and cattle dip, and cattle fly oil. Even those who have commercial orchards and large power sprayers, need the "Auto-Spray," No. 1, for small work.

The Auto-Sprayer, No. 1, when properly charged, contains three gallons of solution and one gallon of compressed air. Eight to twelve strokes of the plunger will compress the air and two pumpings will empty the entire contents, and it works automatically for six to fifteen minutes, according to the nozzle opening, and will give higher and more constant pressure than any other similar machine.

There is not a good feature in any other compressed air sprayer that is not to be found in the Auto-Spray No. 1, and there are many improvements in the Auto-Sprayer No. 1 which are not to be found in any other compressed air sprayer.

The construction is the strongest ever invented, and our tank is the only one which absolutely does not require a safety valve.

The pump is of large capacity, seamless brass, 2-inch diameter, insures rapid pumping and a constant high pressure. The pump plunger can be removed and re-inserted by simply drawing the leather cup into a sleeve.

The Leather Cup is specially treated and remains long in pliable condition. It is fitted underneath with a flexible brass spreader, which keeps it spread out against the sides of the cylinder.

The Spray Nozzle is our "Auto-Pop." The best. It automatically controls the spray; operating the lever, opens or closes the valve, and at the same time works a cleaning stem through the nozzle aperture. Not tiresome as in the case of the thumb operated device. Saves both time and solution.

We use a half-inch hose a little better than the usual, and protect it with a wire coil at the tank connection to prevent breaking. We warrant the Auto-Spray No. 1 to be perfect mechanically, and to give satisfaction in every case. It is used by nearly all State Experiment Stations, by the United States Government, and in all foreign countries.

Auto-Spray, No. 1: Diameter, 7 inches; height, 2 feet; capacity, 4 gallons. Weight, empty, 7 lbs.; loaded, 39 lbs.; shipping weight, 15 lbs. Easily carried either by handle or shoulder strap.

NET PRICES.

Auto-spray No. 1B, Brass tank with Nozzle.....	\$8.50
Auto-spray No. 1D, Galvanized tank with Nozzle.....	5.50

EXTRA ATTACHMENTS FOR AUTO SPRAYER NO. 1

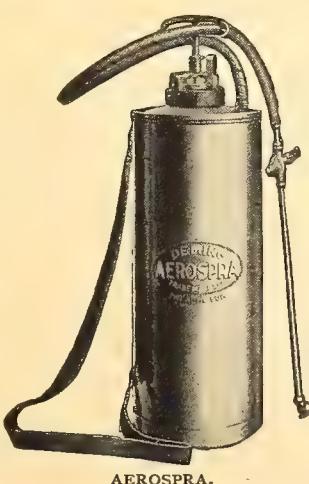
Extension Pipes. Brass, two-foot lengths. As many as three can be used for reaching trees. They screw into one another and go right into the shut-off, which detaches from the Auto-Pop Nozzle. The nozzle goes on the far end of the extension, and the shut-off always remains under control of your hand. Price, two-foot lengths, 60c. each. Mail weight 1 lb.

Brass Elbow. Used for reaching the under side of the leaves. Will fit either the shut-off or extension. Price, 30c. Mail weight 4 oz.

Brass Strainer. Necessary in the proper preparation of solutions. Price, \$1.00. Mail weight 2 lb.

Two-Row Attachment. Made of heavy brass. With two nozzles, 9½ inches apart, arranged at such an angle that they properly cover two rows of crop at one operation. Price, \$1.50. Mail weight 1 lb.

Torch. A practical device for burning worms' nests. Can be used with the Auto-Sprayer only, will force the flame 4½ feet from the outlet. Price, \$1.00. Mail weight 1 lb.



AEROSPRA.

THE DEMING "AEROSPRA."

The "Aerospra" is a compressed-air sprayer of improved design with several new and valuable devices on which patents have been applied for. For several years some of our customers have wanted a hand compressed-air sprayer of especial merit. We have devised one with new features of portability which is much appreciated by the user. The operator can pump up and spray at rest, until the reduced pressure requires pumping again. The tanks are tested up to 100 pounds pressure—more than twice the pressure which is obtained by the average operator.

Specifications

Pump. Brass tube cylinder, diameter 2 inches, stroke 12 inches. Top cap of tank attached to cylinder. The pump can be instantly removed for filling the tank.

Tank. Made either of the best quality of Galvanized Sheet Steel or Sheet Brass. The diameter is 7½ inches and height 18½ inches, with about 4 gallons capacity. The tank should be about two-thirds filled; weight, loaded, is about 30 pounds.

Hose and Nozzle. There is a 3-foot section of ½-inch hose and an 18-inch hose pipe or lance, with spring-plunger stop cock and "Simplex" spray nozzle. With this discharge controller plunger the flow of liquid may be shut off or controlled. **Shipping Weight,** about 20 pounds.

Price. "Aerospra" with brass air pump and brass tank, as illustrated and described \$13.00. "Aerospra," as above, but with galvanized steel tank, \$10.00. Seven-foot section of ½-inch hose with couplings and pole holder, for tree spraying, \$2.00.

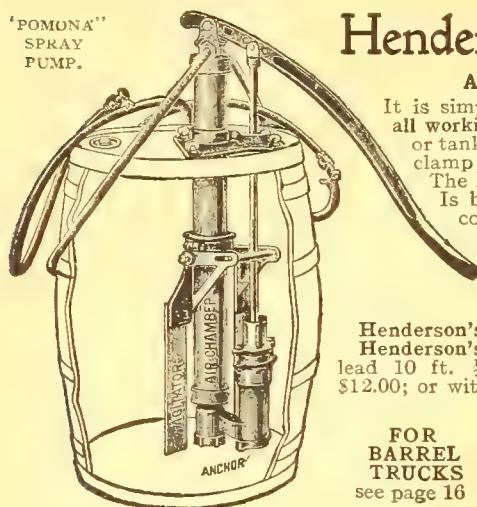


SPRAYING TREES.



SPRAYING POTATOES.

'POMONA'" SPRAY PUMP.



Henderson's "Fruitall" Spray Pump.

A High Grade Pump for Moderate Sized Orchards, Etc.

It is simple, the parts accessible and easily removed for cleaning. It has all working parts of brass. It can be mounted on or removed from barrel or tank by the simple adjustment of two thumbscrews. It is held firmly by clamp at top and anchor at bottom. The Brass Plunger is very strong. The Brass Valves never clog. Steel air chamber. It has a long lever. Is built low down, and with the exception of lever and discharge, is contained within the barrel, offering no obstruction to over-hanging limbs, and is not top-heavy. The pump is easily operated by a single person. The Paddle Agitator is mechanical in its action and much superior to the old method of "return discharge."

PRICES.

Henderson's "Fruitall" Pump only (with Agitator) \$9.00; with barrel, \$13.00. Henderson's "Fruitall" Pump, Outfit "A" Single spray. Pump with one lead 10 ft., $\frac{1}{2}$ in. discharge hose, with "Vemorel" Spray Nozzle and Agitator, \$12.00; or with barrel, \$16.00.

FOR
BARREL
TRUCKS
see page 16

HENDERSON'S "POMONA" SPRAY PUMP.

We unhesitatingly offer this as the best Orchard Spray Pump for mounting on barrel.

It is of large capacity and powerful with long adjustable leverage, so that it is easily operated by one person, when necessary, but is especially built for spraying from two leads of hose. The unusually large steel air chamber gives sufficient pressure for a continuous and regular spray for some time after the operator stops pumping. All working parts are of brass, including plunger and valves, which are easily accessible; the whole pump can be quickly inserted or removed from the barrel; it has a paddled agitator far superior to the old "return discharge" method of stirring. It is adjustable for barrels of different sizes, and as the bulk of the Pump goes within the barrel, it is not top-heavy, and does not catch low branches. We furnish the Pomona for end of barrel only.

PRICES.

Pomona Pump only (with agitator), \$16.00; or fitted to barrel, \$20.00.

Pomona Outfit "A" pump, agitator, 1 lead discharge hose and spray nozzle, \$20.00; or fitted to barrel, \$24.00.

Pomona Outfit "B" pump, agitator, 2 leads discharge hose and 2 spray nozzles, \$22.00, or fitted to barrel, \$26.00.

Brass shut-off for 1 lead, \$1.35 extra; for 2 leads, \$1.60 extra.

Buyer has choice of nozzles, but we send "Mistry, Jr.," unless otherwise ordered.

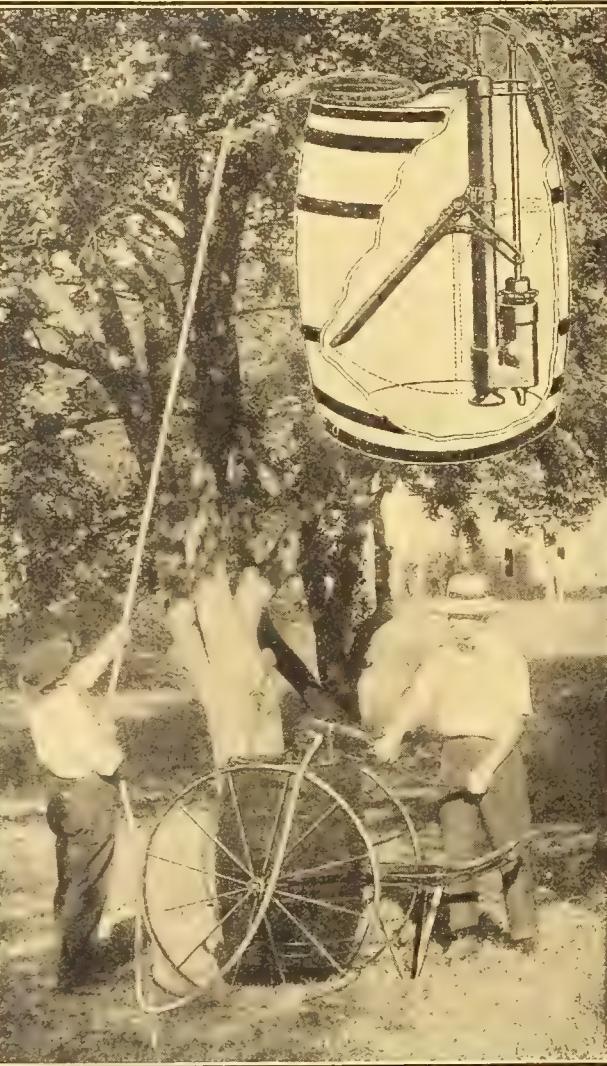
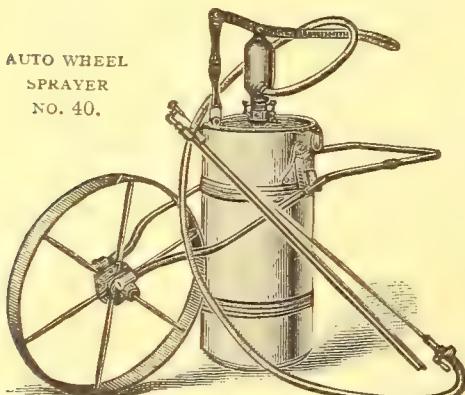
Extras for Tall Tree Spraying.

The following are adaptable for any of our Spray Pumps.

Iron Extension Rods, 8 ft. long, with shut-off cock at base, fitted to attach hose at bottom and nozzle at top, \$1.75 each.

Bamboo Extension Rods, practically the same as above, excepting the pipe is enclosed in bamboo which stiffens it. Price, 10 ft. \$3.50; 12 ft. \$4.00.

Discharge Hose, $\frac{1}{2}$ -in. bore, 12c. per foot. Couplings extra, 25c. per set. (For spray nozzles see page 41.)



SPRAYING WITH THE "FRUITALL" PUMP.



HENDERSON'S "GEM" SPRAY PUMP.

Clamps to the chine or side of any barrel but is made particularly for our Water Barrel and Truck outfit, offered on page 18. The "Gem" is intended to fill a want for a low-priced pump. It has not the power or capacity of the larger and more expensive spray pumps, but where there are only a few trees, bushes, vines, etc., to be treated, it will answer admirably for both applying insecticides and fungicides, and by altering the nozzle it is adapted for sprinkling walks, watering flower-beds, washing windows, carriages, etc. The pump can be quickly removed from the barrel.

PRICES (without barrel or truck.)

Gem Outfit "A." Pump fitted with two feet of suction pipe and brass strainer; $5\frac{1}{2}$ ft., $\frac{1}{2}$ in. hose and nozzle, \$6.00.

Gem Outfit "B." is the same as "A," excepting the hose is $12\frac{1}{2}$ ft. long, fitted with pole connection to spray trees, \$7.00.

For price of Water Barrel and Truck, see page 16.

HENDERSON'S "ACME" SPRAYING OUTFIT.

A very complete and convenient outfit for spraying garden crops, flowers, shrubs, vineyards, etc. It can also be used for other purposes than spraying—such as washing windows, carriages, sprinkling roads and walks, watering garden and flower beds, etc. The hardwood iron-hooped tank, with hinged lid, holds about 25 gallons; is firmly fastened to a cart narrow enough for most garden paths; it is easily wheeled about and sits firmly while the pump is being operated. The force-pump has brass cylinder, to prevent corrosion when fungicides are used. Price, of Acme Spraying Outfit, complete, cart, pump, 6 feet discharge hose and combination spray and stream nozzle. Price, \$20.00. Iron extension pipe 8 feet (for tree spraying), fitted to attach to nozzle and hose, \$1.75 extra.



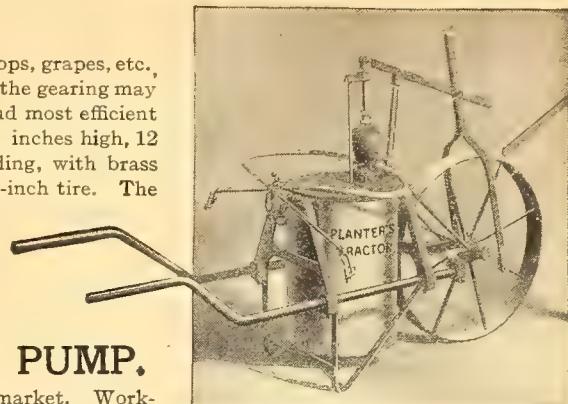
The Auto No. 40 Wheel Sprayer.

Applies, in a mist-like spray, all fluid insecticide and fungicide solutions on garden crops, ornamental plants, shrubs and low trees; also useful for whitewashing, applying sheep dip, fly oils, etc. It is a most convenient, large capacity, Auto Sprayer, fitted to a tubular iron frame with 20-inch wheel, so that it is as easily moved about as a wheel-barrow. The tank of heavy galvanized steel or brass (as may be selected) holds the spray solution and the compressed air pump with which the operator keeps up a continuous and uniform spray. The machine is furnished with 8 ft. of high pressure spray hose with connections in 8 ft. iron extension pipe with lever "shut-off" for tree spraying and the latest pattern Vemorel nozzle, which fits either the hose or pipe. Price, with 12 gal. galvanized steel tank \$16.00; with 12 gal. brass tank, \$20.00; weight 58 lbs., crated, 75 lbs.

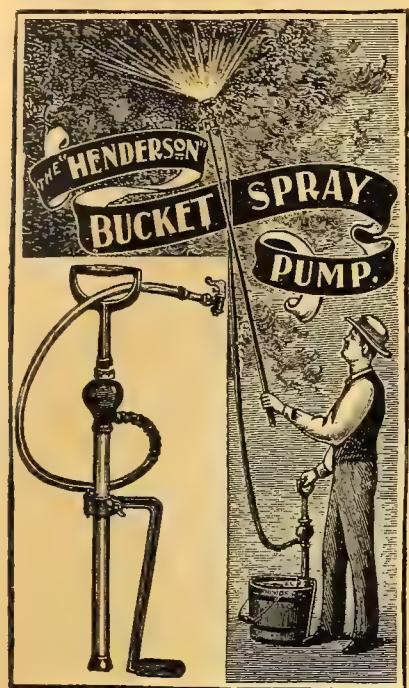
For Water Barrels and Trucks, see page 16. Our new 30 gal. size barrel or truck is convenient for small operations.

THE "PLANTER'S TRACTOR" SPRAYER.

This "Wheel-Barrow" Sprayer is operated by one man, either for spraying two rows of garden or field crops, grapes, etc., the pumping being done by the traction wheel as the machine is pushed along, as fast as a man can walk, or the gearing may be instantly unmeshed and the pump be worked with the handle, the machine standing still. It is the neatest and most efficient sprayer of its kind that we have ever seen. The tank of galvanized metal or brass as may be selected, is 22 inches high, 12 inches in diameter and holds 12 gallons. The air-chamber force pump is of good capacity, is non-corroding, with brass fittings and positive agitator. The frame is of tubular iron, the iron wheel is 20 inches in diameter and 2½-inch tire. The spraying outfit consists of two 2 ft. sections of hose with stop cocks connected each to a hose pipe 18 in. long, having an angle attachment and nozzle so that the spray may be adjusted backward or forward, up or down. Price, with galvanized tank \$30.00; with brass tank \$42.00. Extra, a 7 ft. section of spray hose with couplings for tree spraying \$2.00.



PLANTER'S TRACTOR SPRAYER.



provided is placed in position as shown by the dotted lines. The handle for carrying it is shown in the cut. Price, complete, \$18.00.

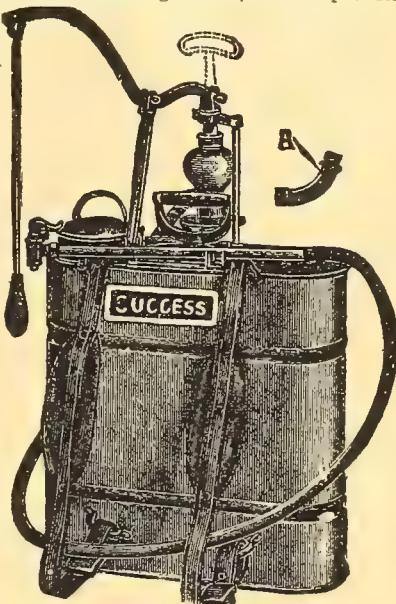
"HENDERSON" HAND BUCKET PUMP.

This is the best and most durable portable hand pump in the market. Working parts are made of solid brass with large air-chamber and is double acting, throwing an absolutely continuous stream, either solid or in a fine spray as desired; very light and easily carried, and works from any bucket or tub. Just the thing for throwing liquid insecticides and fungicides on low trees, shrubs, plants, etc., and by altering the nozzle it can be used for washing carriages, windows, etc. (See cut.) Price, with 3 feet of hose and combination spray and stream nozzle, \$4.50, P.P. 9 lb.; or, with extra 7 feet section of hose and pole connection for tree spraying, \$5.50, P.P. 10 lb.

THE "SUCCESS" KNAPSACK SPRAYER.

A KNAPSACK SPRAYER AND BUCKET SPRAYER COMBINED.
Five-Gallon Brass Tank. Brass Pump with Bronze Ball Valves.

This valuable arrangement is used for applying fungicides, such as Bordeaux Mixtures, Ammoniacal Compound of Copper, and other fluid remedies in a mist like spray, for the treatment of grapes and other vegetation, for the prevention and cure of mildew, black rot, and kindred diseases, as well as for potato blight, etc.; with it a man can spray five to six acres of vines in a day. The machines are made entirely of copper and brass, and the chemicals will not corrode or rust them. The air chamber keeps up a steady pressure, so a continuous discharge is given. The Pump may be worked with either the right or left hand. The drip cup is just below the air chamber, and is made extra wide, so that any leakage around the plunger is returned into the tank and not allowed to run down the operator's back. The attachment shown as A is for underspraying. This sprayer may be used either as a knapsack or bucket sprayer, the illustration as here given showing its use as a knapsack. To be used as a bucket sprayer the handle and the lever are removed and the extra handle with which the outfit is



"SUCCESS" KNAPSACK SPRAYER.

THE "SUCCESS" WHITEWASH SPRAYER.

Whitewash is a necessity in poultry and stock raising, but when applied with a brush, it takes a lot of time and is an unpleasant operation.

Our "Success" is especially designed for whitewashing purposes. The tank holds 5 gallons. The pump has ample valve areas which allow free passage of the liquid, and prevent clogging. It is provided with an agitator and a large strainer, and for this purpose is fitted with a Bordeaux nozzle, which throws a wide, fan-shaped spray that can be graduated from fine to coarse.

The liquid when applied through this nozzle, penetrates every crack and corner where a brush could not, and the result is a uniform white surface.

Price, with galvanized tank, \$11.00; with brass tank for chemical preparations, \$14.00.

FORMULA FOR WHITEWASH As Used on U.S. Forts and Lighthouses

Half a bushel of unslaked lime, slack in warm water, cover it during the process to keep in the steam; strain the liquid through a fine sieve or strainer; add a peck of salt previously well dissolved in warm water, three pounds of ground rice boiled to a thin paste and stirred in boiling hot; half pound of powdered Spanish whitening and a pound of glue which has

been previously dissolved over slow fire. Add five gallons hot water in the mixture, stir well and let it stand for a few days, covered from the dirt. Strain carefully and apply with a spray pump. It should be put on hot.

JUMBO POWDER GUN.

For applying insect powder on plants in the house or small gardens; it will hold about 4 ozs. of powder which is ejected and distributed by a pressure with the thumb.

The "Jumbo" we consider the best small powder distributor on the market. Price, 30c. each, P.P. 8 oz.



DANDELION EXTERMINATOR.

Destroys the root of the troublesome weed by chemical action. Fill the tank with Gasoline or Weed Destroyer and insert point in center of plant as far as the stop, hold instrument and lift up on valve stem, allowing the liquid to flow for an instant; release valve stem and remove instrument. Price, \$1.75.

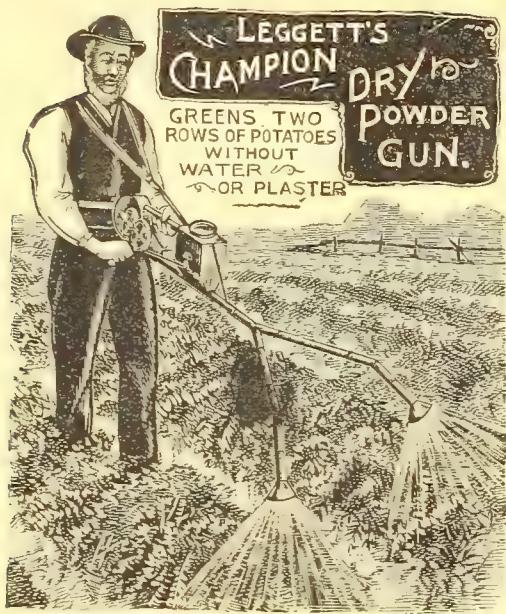
THE ASBESTOS TORCH.

Attach the torch to the end of a pole of suitable length; saturate with kerosene oil, light and hold under the caterpillars nests and pass quickly along the branches and around the trunk of the tree where the insects lodge. The heat instantly destroys the insects and will in no way injure the tree.

Price, without pole, 40c., P.P. 1 lb.



DANDELION EXTERMINATOR.



CHAMPION POWDER GUN.

Blows all dry powders, such as Paris Green, Persian powder, hellebore, sulphur, tobacco, etc., over plants and into trees, for the killing of insects and fungus. It will cover a given area more thoroughly and effectively with a cloud of powder, and use less powder than any other contrivance. With it are supplied various nozzles for different uses. With the "V" nozzles, two rows of potatoes are dusted at one time, then there is a hood nozzle for cabbage worm dusting, it keeps in the powder from escaping beyond the head; then there is a curved nozzle for under dusting, and telescope nozzles to blow powder into tall trees—altogether it is the most complete and satisfactory powder dusting arrangement ever invented. Weight about 5 pounds, is easily carried and is operated by turning a little crank, geared to revolve the blow fans, like a fan mill; the quantity of powder to be distributed can be regulated as required. Price, complete \$9.00.

Champion No. 2 Powder Gun.

A large and more powerful powder distributor than our regular Champion. It does the same range of work being furnished with the various nozzles etc. We especially recommend it for applying powdered Arsenate of Lead which requires a strong blast which the 8 inch fan on the No. 2 supplies. The holding capacity may be increased by attaching the extra reservoir going with this machine. Weight about 8 lbs. Price \$12.00.



NORTON'S PLANT DUSTER.

NORTON'S PLANT DUSTER.

This is one of the best articles for dusting potatoes, vines, etc., with powder insecticides. A slight jolting movement distributes the dust in a fine cloud. It is made scientifically correct with a cylinder air-chamber projecting above the powder so that it never clogs. Another point of merit is the projecting dust guard, which prevents the powder from escaping beyond the plant being treated.

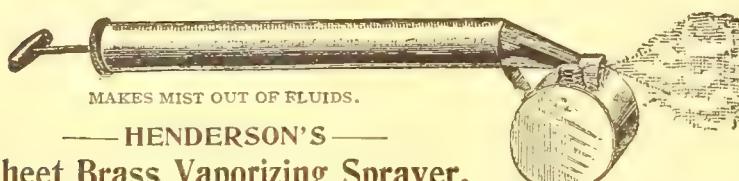
Price, \$1.00 each, P.P. 5 lb.



ACRE-AN-HOUR SIFTER.

For applying dry mixtures economically, such as Slug Slot. Plaster or Cement and Paris Green, Bordeaux or any prepared mixture to potato vines, cabbage, tobacco, and cucumbers, rose and current bushes, as fast as a man can walk. Will cover perfectly and instantly plant 3 feet in diameter. Easy job for the boys. For large acreage use one in each hand.

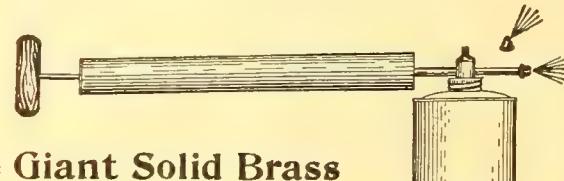
Price, 75c. P.P. 21b.



MAKES MIST OUT OF FLUIDS.

HENDERSON'S Sheet Brass Vaporizing Sprayer.

Applies insect and fungus killing fluids to plants in a most satisfactory manner with no waste of material covering uniformly every portion and crevice. It is also splendid for applying disinfecting fluids to henhouses, cellars, animals, etc., also for applying "Cattle Comfort" or other preparations to animals to save them from flies, mosquitoes, etc. The air and water tips are protected from injury by knobs or dents and consequently it always works, which cannot be said of some similar sprayers, when the tips are bent out of unison. It is made entirely of brass, so that fungicide preparations will not corrode it, nor will it rust. The tapering point to the air-chamber gives great force to the spray. Holds about one quart. Price, \$1.25 P.P. 3 lb.



Little Giant Solid Brass Compressed Air Atomizer and Sprayer.

The most perfect small hand compressed air sprayer made. Delivers a continuous fog-like spray. Is fitted with straight and adjustable nozzles making a perfect under leaf sprayer. In fact, spray can be delivered at any angle or position desired. Made in solid brass sheet highly polished; holds 1 quart. Price, \$2.00 P.P. 21b.

Greenhouse Fumigators for Smoking Plants.

EUREKA FUMIGATORS

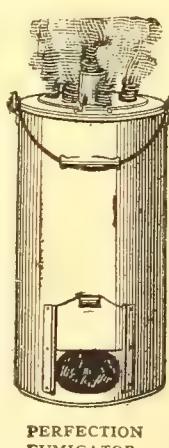
For fumigating greenhouses with dampened tobacco stems; made of galvanized sheet iron; a damper regulates the draft; no danger of fire; no ashes or litter. No. 1, 12 ins. high, \$1.60; No. 2, 16 ins. high, \$2.75; No. 3, 20 ins. high, \$3.25; No. 4, 24 ins. high, \$4.50.

PERFECTION FUMIGATORS.

Make Moist Smoke.



This fumigator will last for years; it has a water tank between the fire and the outside, preventing burning out. The tank should be filled with tobacco water, from which a vapor arises and mixes with the dry smoke from the stems, producing a dampened smoke more dense and less injurious, to delicate foliage than from any other fumigator made. Outside fumigating can also be done with the Perfection; the cast iron lid is made so a hose can be attached, and all the outlets for the smoke (except through the hose) can be closed off. No. 1 holds one peck of stems, \$3.50; No. 2 holds half bushel of stems, \$4.25. No. 3 holds three-quarters bushel stems, \$5.00.



PERFECTION FUMIGATOR.

Henderson's House Plant Vaporizer.

Just the thing for applying fluid Insecticides such as Aphine, Lemon Oil, etc., to palms, ferns and other potted plants in the house or window garden. By pressing the rubber bulb a fine mist like vapor is ejected which envelopes the plant, settles on the leaves and stems destroying green and black fly, mealy bug, scale and other insects without injury to the plant. The bottle holds 4 oz. of the liquid which of course must be diluted according to the directions accompanying the insecticide used.

Price of Henderson's House Plant vaporizer 75c. each.



The Kirke Automatic Lawn and Garden Feeder

ALSO INSECT AND BLIGHT ABOLISHER

Merely slip a cartridge for either purpose in the container, attach to the hose and water as usual.

This Kirke System of liquefying and applying in mild solution cartridges of concentrated fertilizers, insecticides or fungicides, through the hose while watering the garden and lawn, is a simple, practical and most efficient method. The feeder is a nickel-plated durable metal affair, about 6 inches long by $2\frac{1}{2}$ inches in diameter with strainer in the outlet end; the top unscrews for the insertion of cartridge. It is fitted to couple to any $\frac{3}{4}$ -inch garden hose, either at the faucet or nozzle end. The cartridges—clean and odorless—have been compounded by an expert agricultural chemist and contain in concentrated slowly soluble form the various ingredients—strictly high grade and scientifically blended for the purpose designed, so that when the hose is turned on the cartridge gradually dissolves and impregnates the outflowing water with a proportion of plant food, insect destroyer or fungus remedy.

PRICES	Each	$\frac{1}{2}$ doz.	Doz.	Mail Wt.
Kirke Cartridge Feeder	\$2.00	...	...	1 lb. each
Kirke Fertilizer Cartridges	.20	\$1.10	\$2.00	7 lb. doz.
Kirke "Tobacco" Insecticide Cartridges	.30	1.60	3.00	6 lb. doz.
Kirke Arsenate of Lead Insecticide Cartridges	.40	2.25	4.00	7 $\frac{1}{2}$ lb. doz.
Kirke Bordeaux Cartridges	.25	1.35	2.50	5 lb. doz.

If by Parcel Post add postage at Zone Rates, see 2d page cover.

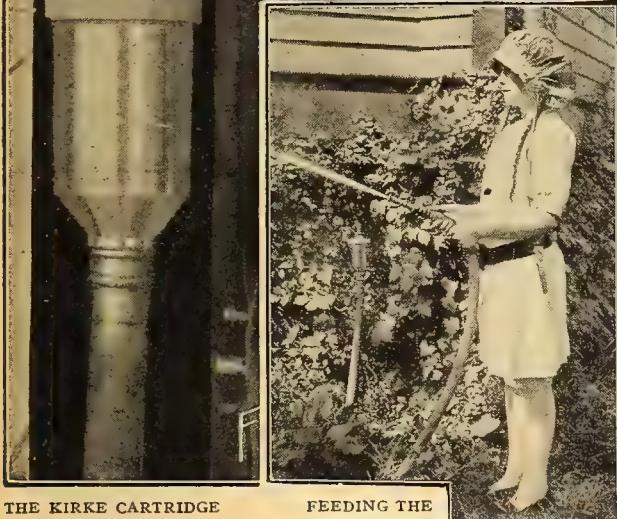
NOTE: The fertilizer Cartridge may be used with an ordinary hose nozzle but a *Spray Nozzle* should be used when applying insecticides. We recommend the "Bordeaux" nozzle offered on page 41—price with reducer to fit $\frac{3}{4}$ in. hose coupling \$1.20.

THE KIRKE FERTILIZER CARTRIDGE (Color green, weight about 8 ozs.). Contains the proportions of nitrogen, phosphoric acid and potash in high grade, soluble and assimilable plant food form and is immediately effective in feeding and invigorating lawns, grass tennis courts, putting-greens, etc.—whether applied through hose nozzle or lawn sprinkler. For gardens, vegetables, flowers, shrubs, etc., it is equally beneficial, and being so diluted with an abundance of water which carries the plant feeding constituents right to the roots, there is no danger of burning grass or any vegetation, whether applied spring, summer or fall. If you want a luxuriant, velvet-green lawn throughout hot, dry weather use the Kirke Fertilizer Cartridges and Distributor.

THE KIRKE TOBACCO CARTRIDGE (Color brown, weight about 6 $\frac{1}{2}$ ozs.). The active agent in this is nicotine, destructive to all sucking insects such as Aphis, Plant Lice, Green Fly, Thrip, Leaf Hopper, Mealy Bug, Currant Worms, Canker Worms, etc. It is not poisonous and will not injure fruits nor flowers. To be effective for insects of this class the insecticide must touch them, therefore should be applied with a spray nozzle. See note above.

THE KIRKE ARSENATE OF LEAD CARTRIDGE (Color white, weight about 10 ozs.). This is a very effective poisonous insecticide for Bugs, Beetles, Caterpillars, Worms and Slugs that chew or eat foliage, etc. Applied in a spray it adheres to the plants without injury and the moment the slightest particle reaches the stomach of the depredator he is done for. Apply with a spray nozzle. See note above.

THE KIRKE BORDEAUX CARTRIDGE (Color blue, weight about 5 oz.) The active ingredients of this best of all fungicides is Copper Sulphate and Lime. An effective remedy and preventative for Mildew, Blight, Rust, Leaf Spot, Bitter Rot and other fungus diseases. Apply in spray form so it will cling to the foliage, etc.—it then also acts as a deterrent for many insects. Apply with a spray nozzle. See note above.



THE KIRKE CARTRIDGE CONTAINER



INVIGORATING THE LAWN



SPRAYING FOR INSECTS



Tree Tanglefoot.

PREVENTS CATERPILLARS FROM CRAWLING UP TREES!

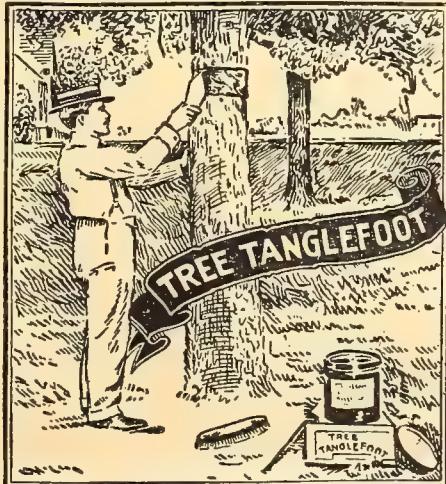
Tree Tanglefoot—made by the "Tanglefoot Sticky Fly Paper" Manufacturers—is the most successful and economical method of keeping caterpillars, cut worms, ants and other climbing insect pests out of trees. After a tree is cleaned of the cocoons and eggs, it is banded 3 to 5 inches wide and $\frac{1}{8}$ of an inch thick with Tree Tanglefoot—applied like soft putty with a paddle and it will protect the tree from further ravages of these pests, providing the bands are inspected occasionally to see that the surface has not become coated, with dust or broken. Renew the bands each year to protect the tree perpetually.

NO CRAWLING INSECT CAN PASS A BAND OF TREE TANGLEFOOT.

Tree Tanglefoot remains sticky on the tree for fully 3 months—during any weather from freezing to 110° Fahrenheit—does not dry up nor drop off—nor is it effected by rain storms. It should be applied very early in the spring—before the caterpillars commence to crawl—and again in the fall.

Quantity Needed.—One pound will be sufficient for a six-foot band 4 inches wide, $\frac{1}{8}$ inch thick.

Price.—1 lb. can, 35c., P. P. 1 $\frac{1}{2}$ lb.; 3 lb. can, \$1.00, P. P. 3 $\frac{1}{4}$ lb. The following cannot be mailed: 10 lb. can, \$3.00; 20 lb. can, \$5.50. 25 lb. can, \$6.75.



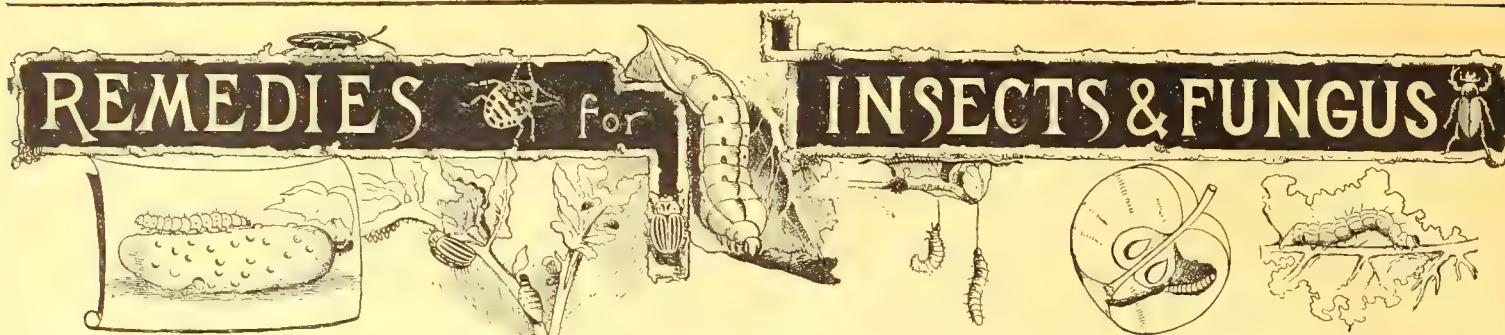
Sticky Tree Cord.

For banding trees to prevent the ascent of Caterpillars and other insects.

A soft cord about $\frac{1}{8}$ of an inch in diameter, thoroughly saturated and coated with a black sticky material similar to that used on sticky fly paper. It is supplied in tubes about $2\frac{1}{4}$ x 6 inches, containing about 30 ft. of cord which is pulled out through a hole in the screw top, which has an attachment for clamping to facilitate cutting off the cord. It is applied to trees by tacking one end of the tree, then passing it around once or twice, tacking about every 18 inches and then cut off. The cord will not run or drip appreciably and will remain sticky for three or four months according to climatic conditions.

Economy. Each tube contains sufficient to band about 10 trees six inches in diameter twice around. Trees banded with Sticky Tree Cord are not unsightly. No injury is sustained by the tree because little material comes out of the cord and it is non-poisonous. Rough barked trees such as Poplar, Gum, etc., should have a channel two inches wide cut into the bark to give a fairly smooth surface for the cord. No caterpillar, slug, worm or other insect can cross it nor go underneath it if properly applied. It is easy to remove in the fall, leaving very little trace.

Price, 25c per tube. \$2.50 per doz. tubes. A small clamp to catch hold of the cord is supplied free. Weight about 1 $\frac{1}{2}$ pounds.



INSECTS THAT EAT PLANTS, FOLIAGE, VEGETABLES, FRUITS, FLOWERS, ETC. whether bugs, beetles, worms, caterpillars or slugs, are more quickly and effectually destroyed with a poisonous insecticide as Arsenate of Lead, Paris Green or Hellebore. These if intelligently applied according to directions are so dilute as to be harmless to vegetation and to animal life, excepting in quantity. Less poisonous stomach and contact insecticides are Bug Death, Fir Tree Oil Soap, Kerosene Emulsion, Slug Shot, etc.

FOR HOUSE AND CONSERVATORY PLANTS the most convenient insecticides are Aphine, Nicotine and Lemon Oil.

FUNGUS ON PLANTS, TREES, FRUITS, VINES AND VEGETABLES as mildew, spot, dry rot, and rust should be promptly treated with Bordeaux, Ammoniated Copper Solution, Fungine or Sulphur.

THE BEST COMBINED FUNGUS AND INSECT DESTROYERS are Bordeaux-Arsenate and Pyrox.

FOR SCALE ON HARD WOODED PLANTS, SHRUBS AND TREES use Kerosene Miscible Oil, or if dormant Lime-Sulphur Solution or Scalecide.

FOR TREE BORERS use Borowax. For Tree Wounds use Tree Wound Paint.

TO PREVENT CATERPILLARS AND INSECTS CRAWLING UP TREES, use Sticky Tree Cord, Tree Tanglefoot or Fish Oil Soap.

INSECTS THAT SUCK THE JUICES FROM PLANTS, FOLIAGE, ETC., such as lice, green, black and white aphis or fly, mealy bug, red spider and scale, thrust their proboscis into the leaf or stem, consequently are not affected by stomach poisons and must be destroyed by contact insecticides. Those in powder form kill by closing the breathing pores in the insect's skin; or in fluid form by being absorbed through these pores. The best contact insecticides in powder form are Bug Death, Hellebore, Slug Shot and Tobacco Dust. The best in fluid form are Aphine, Black Leaf 40, Fir Tree Oil Soap, Fish (Whale) Oil Soap, Nicotine (Tobacco Extract), Kerosene Miscible Oil, Lemon Oil, "X L All" Liquid Insecticide.

FOR FUMIGATING CONSERVATORIES AND GREENHOUSES use Aphis Punk, Nico-fume, Tobacco Powder or Tobacco Stems; for fluid vaporizing use Nicotine or "X L All" compound.

FOR UNDERGROUND INSECTS, ants, root lice, grubs, maggots, cut-worms, etc., use Ant-i-cide, Cutworm Killer, Tobacco Dust, Scotch Soot or Vermine.

FOR ANGLE OR FISH WORMS IN LAWNS, PUTTING-GREENS, TENNIS COURTS, ETC., use Henderson's Worm-Killing Grass Food.

FOR POTATO SCAB, GRAIN SMUTS, DISINFECTING, ETC., use the germicide Formaldehyde.

FOR ANIMAL INSECTS AND PESTS use Cattle Comfort or Thymo-Cresol.

ABOUT MAILING

Powders, Soaps and Pastes (those offered by the pound)—non-poisonous—can be sent by Parcel Post if sufficient is added to the prices, to pay postage at Zone Rates (see page 1).

Fluids (those offered by the quart, etc.) and poisonous powders are not mailable.

APHINE. A powerful insecticide, readily soluble in water and applied as a spray, wash or dipping solution. It kills green and black fly, thrip, red spider, slugs, ants, mealy bug, scale, etc. Price, 1 gill, 25c.; $\frac{1}{2}$ pint, 40c.; pint, 65c.; quart, \$1.00; gallon, \$2.50.

APHIS PUNK is a wood-pulp paper, in 6x33-inch sheets, saturated with 22½ per cent. nicotine, rolled and dried. When lighted it burns slowly and is a cleanly, convenient and effectual remedy for "smoking" conservatories, etc., for green and black fly, thrip, etc. Price, per carton of 12 rolls, 60c. (mail weight, 1 lb.); per case of 12 cartons, \$6.50.

ANT DESTROYER (non-poisonous), Designed Especially for Use on Lawns, Tennis Courts and Putting Greens. Positively effectual. This product was used successfully for two years on the grounds of one of the most famous Golf Clubs in America before being offered to the public.

Directions. The best way is to insert tube of squirt can about four or five inches in ant-hill, withdraw about one inch and press plunger ONCE, press foot on opening to close entrance to nest. This will destroy ants and eggs without injuring the sod. If a can is not available, a stout wire or slender stick may be inserted in the opening, withdrawn and about a tablespoonful of the liquid poured in. One quart, 45c.; one gallon, \$1.25; five gallon can, \$6.00.

ANT-I-CIDE. A powder with a repellent odor, effective against ants and crawling insects that infest lawns. Strew so the surface infested will be thoroughly covered. One pound will dress about 300 square feet. Price, 1-lb. package, 25c.; 5-lb. bag, \$1.00; 25-lb. drum, \$4.50.

ARSENATE OF LEAD—PASTE. A poison taking the place of Paris Green. Its advantages are that it adheres to foliage, does not readily wash off by rain and does not injure tender foliage. It remains suspended in solution so that an even distribution can be obtained. It is white in color and shows just where it has been applied. Price, 1-lb. tin, 25c.; 5-lb. tin, \$1.00; 12½-lb. pail, \$2.50; 25-lb. bucket, \$4.50; 50-lb. bucket, \$8.00; 100-lb. keg, \$14.00.

ARSENATE OF LEAD, POWDERED. May be used either as a dust diluted with hydrated lime, plaster or road dust, or as a liquid spray with water, lime-sulphur, solution or Bordeaux, only half the weight is needed as of the paste form. Price, 1-lb., 45c.; 5 lbs., \$2.00; 10 lbs., \$3.50; 25-lb. lots and over at 30c. per lb.

BLACK LEAF 40. An effective insecticide for sucking insects such as plant lice, aphis, red spider, leaf hopper, thrip, etc., sprayed on. Dilute 2 teaspoonsful to a gallon of water. It also forms a splendid combined spray for both insects and fungus with Bordeaux. Price, 1-oz. bottle, 25c.; $\frac{1}{2}$ -lb. tin, 75c.; 2-lb. tin, \$2.50; 10-lb. can, \$10.75.

BORDEAUX—ARSENATE OF LEAD. A combination in proper proportions of these standard insecticide and fungicide remedies, thus killing insects and eliminating fungus plant diseases at one spraying and accomplishing the objects in half the time required to spray on separately. Quantity required, 1 to 2 lbs. in 10 gallons water. Price, 1 lb., 25c.; 5 lbs., \$1.15; 10 lbs., \$2.25; 25 lbs., \$4.75; 50 lbs., \$8.00; 100-lb. keg, \$15.00.

BORDEAUX—PASTE. Ready for use by simply adding 1 part to 50 of water. An indispensable fungicide, curing and preventing black rot, mildew, blight, rust, scab, and all fungoid diseases on fruits and plants. Price, 1 pint, 30c.; 1 quart, 45c.; 1 gallon, \$1.25; 5 gallons, \$5.00.

BORDEAUX, POWDERED. Requires 1 to 1½ lbs. to 10 gallons of water as a fungicide spray. Price, 1 lb., 35c.; 5 lbs., \$1.50, 10 lbs., \$2.75.

BOROWAX. A complete protection against tree borers if applied in accordance with instructions, at the point where the moth deposits its eggs. Quantity required, half to one pint to a tree according to size. Price, quart, 35c.; half gallon, 60c.; gallon can (boxed), \$1.00; 6 gallons (boxed), \$5.00; half-barrel, \$20.00; barrel, \$35.00.

BUG DEATH. A non-poisonous insect-killing powder, for cabbage and tomato worms, potato and cucumber bugs, etc. Apply with a duster, bellows or powder-gun, at the rate of about 12 lbs. per acre. *Mail weight, 1½ lbs., per lb.* Price, 20c. per lb.; 3 lbs., 45c.; 5 lbs., 60c.; 12½ lbs., \$1.25; 100 lbs., \$9.25.

BUG DEATH SHAKER for applying above, 25c.

CATTLE COMFORT. Protects horses, cattle, dogs, etc., from flies, gnats, mosquitoes, horsefly and other insects, is healing to sores, destroys head lice on fowl, etc. Price, 1 quart, 50c.; 1 gallon, \$1.50; 5 gallons, \$6.00.

COPPER SOLUTION, AMMONIATED. A fungicide, the essential ingredient, "Carbonate of Copper," being dissolved in ammonia, while in Bordeaux it is counteracted by lime. For spraying when fruits are nearing maturity, or plants in bloom, Copper Solution is usually used, as there is no limy sediment left to be washed off. One quart is sufficient for 25 gallons of spray. Price, 1 quart, 75c.; 1 gallon, \$2.25.

CUT WORM KILLER. A coarse powder for sprinkling near the plants to be protected. It has an enticing odor and the worms prefer it to vegetation. One pound is sufficient for 175 plants in hills, or 100 feet when in rows. Price, 1-lb. sprinkler box, 25c. (mail weight, 2 lbs.); 5-lb. tins, \$1.00 (mail weight, 6 lbs.); 25-lb. drum, \$4.00; 100-lb. bag, \$12.00.

TREE WOUND PAINT is an insurance against decay, having penetrating, antiseptic and elastic waterproofing qualities. Sun and rain cannot cause the coating to break from the treated wood. Price, quart, 50c.; gallon, \$1.50; 5 gallons, \$6.25; 10 gallons, \$10.00.

FIR TREE OIL SOAP. A popular insecticide; it frees plants of nearly all insects to which they are subject, and for the following it has no superior: mealy bug, scale, red spider, aphis, thrip, blight, worms and slugs. An ounce makes one gallon. Price, $\frac{1}{2}$ -lb. tin, 30c. (mail weight, 1 lb.); 2 lbs., 85c. (mail weight, 3 lbs.)

FISH OIL SOAP. (Whale Oil Soap.) Makes an excellent wash for trees and plants where insects and eggs affect the bark, and for smearing on the trunks of trees to prevent worms from crawling up. Price, 20c. per lb. (mail weight, 2 lbs.); 5 lbs., 75c. (mail weight, 6 lbs.); 10 lbs., \$1.25; 25 lbs. and over, 10c. per lb.

FORMALDEHYDE. It is of pronounced efficiency in destroying disease germs affecting both animal and plant life, and is successfully employed as a preventive of such fungoid diseases as potato scab, onion and grain smuts, musty corn and other affected seeds, damping off of seedlings, club root of roses, etc. The dilution for most purposes is 1 lb. (1 pint) to 15 or 20 gallons of water and 1 to 2 gallons of this dilution is required for the treatment of a bushel of seed. Price (40 volume %), 1-lb. bottle, 50c.; 5-lb. bottle, at 40c. lb.; 10-lb. bottle, at 35c. lb.; 50-lb. demijohn, at 28c. lb.; 132-lb. carboy, at 25c. lb.

FUNGINE. An effective sulphurated spraying remedy for mildew, rust and other blights. Does not stain the foliage. Price, half pint, 40c.; pint, 65c.; quart, \$1.00; gallon, \$3.50.

HELEBORE, Powdered White. For the destruction of slugs, worms, caterpillars, etc. Less poisonous than Paris Green and Arsenate of Lead, and safer to use when fruits or vegetables are nearly ripe. Can be used as a powder or dissolved, 1 ounce in 3 gallons of water. Price, 65c. per lb.; 5 lbs., \$3.00 (mail weight, 1½ lbs. per lb.).

KEROSENE MISCIBLE OIL. Better than Kerosene Emulsion, mixes easier, has greater killing power and is especially valuable against all soft bodied insects. Can be used on practically all insects for which Nicotine is employed. For Wooly Aphis on apple and thorn it is much more effective than Nicotine. Contains 80% Kerosene. Dilute 1 part Oil to 16 parts water. Tender plants 1 part to 36 parts water. Price, 1 pint, 20c.; 1 quart, 35c.; 1 gallon, 85c.; 5 gallons, \$4.00.

LEMON OIL. An efficient insecticide for all sucking insects and soft scales. It is applied as a spray or wash and has an agreeable odor. Price, $\frac{1}{2}$ pint, 25c.; 1 pint, 40c.; quart, 75c.; $\frac{1}{2}$ gallon, \$1.25; 1 gallon, \$2.00.

LIME SULPHUR SOLUTION. For all scale insects on trees and shrubs, also of benefit for such fungus bark diseases as can be treated in winter. Must be diluted and applied with a (Continued on Page 203).

spray pump while the trees are dormant, after the leaves have fallen in fall and before the buds swell in spring. It can be used quite strong during mid-winter, but earlier or later it will be safer to dilute it 1 gallon to 30 to 40 of water. Price, quart can, 30c.; gallon, 75c.; 5-gallon can, \$2.50; barrel of 50 gallons, \$10.00.

NICOTEEN. An extract of tobacco, containing about 30 per cent. nicotine. A most effectual, economical and safe remedy for spraying greenhouses and garden plants, diluted two teaspoonsful to a gallon of water for most insects. For fumigating greenhouses, etc., use a scant tablespoonful to 1½ pints of water, for each pan, which is sufficient when vaporized, by placing a hot iron in it, for 600 square feet of floor space. Price, 8-lb. bottle, \$10.00; 4-lb. bottle, \$5.00; 1-lb. bottle, \$1.50; ½-lb. bottle, 85c.; 1½-oz. bottle, 40c.

NICO-FUME. A tobacco paper saturated with nicotine. It comes in strips, which, suspended and lighted, is one of the best, easiest and least injurious methods of fumigating conservatories for aphis and all insects that succumb to tobacco insecticides. One sheet is sufficient for two thousand cubic feet. Price, air-tight cans of two dozen sheets, 85c. (mail weight, 1 lb.); 1 gross sheets, \$4.00 (mail weight, 4 lbs.); 2 gross sheets, \$7.50 (mail weight, 7 lbs.).

PARIS GREEN. An insoluble, poisonous powder for potato bugs, codling moth, worms, caterpillars, slugs and bugs. Applied as a powder it should be mixed with plaster or flour, 100 parts to 1 part of Paris Green; in solution mix 1 lb. in 200 to 300 gallons of water. Price, ½ lb. package, 35c.; 1-lb. package, 60c.; 5-lb. package, \$2.75.

PYROX. A combined insecticide and fungicide for all leaf-eating insects, blights and fungus troubles on trees, grapes, small fruits, potatoes, cucumbers, vegetables, roses, shrubbery, etc. It is a creamy paste, and needs only to be mixed with cold water to apply. Price, 1-lb. bottle, 25c.; 5-lb. crock, \$1.00; 10-lb. crock, \$1.85; 25-lb. crock, \$4.50; 50-lb. keg, \$8.00; 100-lb. keg, \$15.00.

SCALECIDE. The best spray for San Jose scale, cottony maple scale and Pear Psylla. It is not poisonous, being a mechanical preparation of petroleum that mixes with cold water and is ready to apply. 1 gallon to 20 gallons of water sprayed on trees and bushes will kill every scale that it reaches without injury to tree or fruit if applied in late fall, winter or early spring while the foliage is off. Price, 1 quart, 40c.; 1-gallon can, \$1.00; 5-gallon can, \$3.75; 10-gallon can, \$6.75; 30-gallon barrel, \$16.50.

SCOTCH SOFT COAL SOOT. For soil insects and also a stimulating fertilizer. Used in onion drills, radish beds, cabbage grounds, etc., it checks the attacks of grubs, cut worms, etc. When scattered lightly, as a top-dressing around plants, it drives away insects that hide in the ground and lay their eggs near the roots. Price, 50-lb. bag, \$2.50; 100-lb. bag, \$4.00.

SLUG SHOT. A non-poisonous powder insecticide; it requires no mixing or preparation, easily applied and not injurious to animals, the person applying it, or fruits and vegetables treated. Very effectual in destroying potato bugs and beetles, green and black flies, slugs, worms, caterpillars, etc. Price, per keg of 125 lbs. net, \$7.50; per barrel of 250 lbs. net, \$14.00; 10-lb. package, 70c. (mail weight, 1½ lbs. per lb.); 5-lb. package, 40c.; in tin canister with perforated top for applying, 30c. each (mail weight, 2 lbs.).

STICKY TREE CORD. Tack one end to the tree and pass around it once or twice and tack on every 18 inches, or in the furrows of rough barked trees, it will then prevent caterpillars, etc., from crawling up the tree; lasts all summer; easily put up and removed. It comes in tubes containing about 30 feet. Price, 25c. or \$2.50 per doz. (mail weight, 1½ lbs. each).

SULPHUR, FLOWERS OF. Price, 10c. per lb. (mail weight, 2 lbs.); 10 lbs., 75c.; 25 lbs. and over, at 6c. per lb. (mail weight, 1½ lbs. per lb.).

THYMO-CRESOL or ENGLISH COLD WATER SHEEP DIP. A gallon makes a hundred gallons for most uses. A world-famous dip, and, besides, is unexcelled as an internal and external remedy for animal wounds and skin

diseases, for killing animal parasites, mixing with whitewash for trees, chicken-houses, kennels, etc. Price, pint can, 50c.; quart can, 80c.; 1-gallon can, \$2.25; 5-gallon can, \$7.50.

TOBACCO DUST, FINE. For green and black aphis, flea-beetles, etc. Splendid fertilizer and preventative for insects in the ground and around roots. Price, 10c. per lb. (mail weight, 1½ lbs. per lb.); 5 lbs., 35c.; 10 lbs., 60c.; 25-lb. bag, \$1.00; 50-lb. bag, \$1.75; 100-lb. bag, \$3.00.

TOBACCO POWDER, FUMIGATING. Extra strong dust for fumigating. Price, 25-lb. bag, \$1.50; 50-lb. bag, \$2.50; 100-lb. bag, \$4.00.

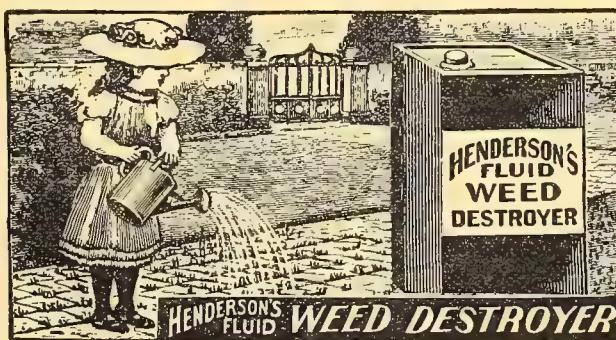
TOBACCO STEMS. For fumigating greenhouses for green and black aphis and other insects. Price, 100-lb. bale, \$1.50; per ton of 2,000 lbs., \$25.00.

TREE TANGLEFOOT. No crawling insect can pass a band of tree tanglefoot. Apply early in the spring—before the caterpillars commence to crawl and again in the fall if troubled with the fall canker worm. One pound for a 6-foot band 4 inches wide, 1-16 inch thick. Price, 1-lb. can, 35c.; 3-lb. can, \$1.00; 10-lb. can, \$3.00; 20-lb. can, \$5.50 (mail weight, 1½ lbs. per lb.).

VERMINE. A soil vermicide and sterilizer that protects garden plants and lawns from the ravages of underground insects, root lice, maggots, cut worms, wire worms, grubs, ants, etc. Use 1 part vermine to 400 parts water, thoroughly saturating the ground. If the ground is not planted and can lie idle for two or three days a much stronger solution is used. Price, gill, 25c.; half pint, 40c.; pint, 65c.; quart, \$1.00; gallon, \$3.00.

X. L. ALL VAPORIZING COMPOUND. An English preparation for fumigating greenhouse. Bottle containing sufficient to fumigate 10,000 cubic feet, \$2.50; 20,000 cubic feet, \$4.50.

X. L. ALL LIQUID INSECTICIDE FOR SPRAYING. An English nicotine preparation. Price, pint, 65c.; quart, \$1.25; ½ gallon, \$2.25; gallon, \$4.50.



Henderson's Worm-Killing Grass Food

Feeds the Grass and Eliminates the Worms

Henderson's Worm-Killing Grass Food not only stimulates the grass on lawns, putting-greens, tennis courts, croquet grounds, etc., into rich green growth but it quickly eliminates the earth or angle worms that burrow in the turf in almost unbelievable quantities, causing the soil to become sticky, sour and loosening it and the roots so that hot sun and dry weather cause the grass to turn yellow and die out in spots. More lawn troubles are traceable to earth worms than most people realize and we advise all whose grass is not as good as it should be to apply Henderson's Worm-Killing Grass Food at the rate of ½ pound to a square yard during rainy weather or else water in thoroughly with a hose. The worms will then almost immediately come to the surface and die. For putting-greens it is invaluable, keeping them free from worm casts, level and true without the trouble and expense of daily brushing and rolling. It is used by many Golf and Country Clubs and on many private grounds in the United States, and all users are gratified with the results. Henderson's Worm-Killing Grass Food is a non-poisonous powder not injurious to animal or bird life. Its fertilizing properties while combined into a well-balanced grass food are not so strong but that it can safely be applied on grass according to directions at any season of the year. Use one pound for each two square yards. Though late in the season when the worms are deep in the ground the quantity may be increased.

Price of Henderson's Worm-Killing Grass Food (F. O. B. N. Y.):

5 lb. pkg. (Mail wt. 6 lbs.)	\$0.75	50 lb. bag	\$ 3.50
10 " " (Mail wt. 11 lbs.)	1.25	100 " bag	6.00
25 " "	2.00	Ton (20-100 lb. bags)	100.00

"Kindly book us for one ton of Henderson's Worm-Killing Grass Food for spring delivery. We take pleasure in advising that the sample ton from you last year was the means of thoroughly eradicating the worms wherever applied. It is certainly the best preparation of its kind we have ever used."

W. S. THOMAS (Chairman Greens Com., Country Club of Glen Ridge),
Glen Ridge, N. J.

"Was more than pleased with your Worm-Killing Grass Food. It is a sure exterminator of the angle worm. Our grass was very much improved in quality and evenness of surface by the use of it. Will place another order for it with you next spring."

D. M. BLA NFOR D, Silver Springs, Md.

Henderson's Fluid Weed Destroyer

It completely destroys all weeds, wherever applied, and by its effect on the ground prevents the growth of fresh ones for a year afterwards, thus saving an immense amount of labor in hoeing, etc. For brick walks it is a boon. Its application is easy, being in a liquid form and only requiring to be mixed with water and applied with a watering can or sprinkling cart. If the ground is very dry it should first be sprinkled with clear water, so the Weed Destroyer will not soak away too quickly. Where large weeds and docks are to be destroyed it is best to mow or chop off the tops first. Full directions for use with each package. (Not mailable.)

Quart Can	\$0.50	Dilutes with 30 to 40
Gallon Can	1.50	parts of water. 1 quart
5-Gallon Keg	5.50	makes 7 to 10 gallons
50-Gallon Barrels	40.00	

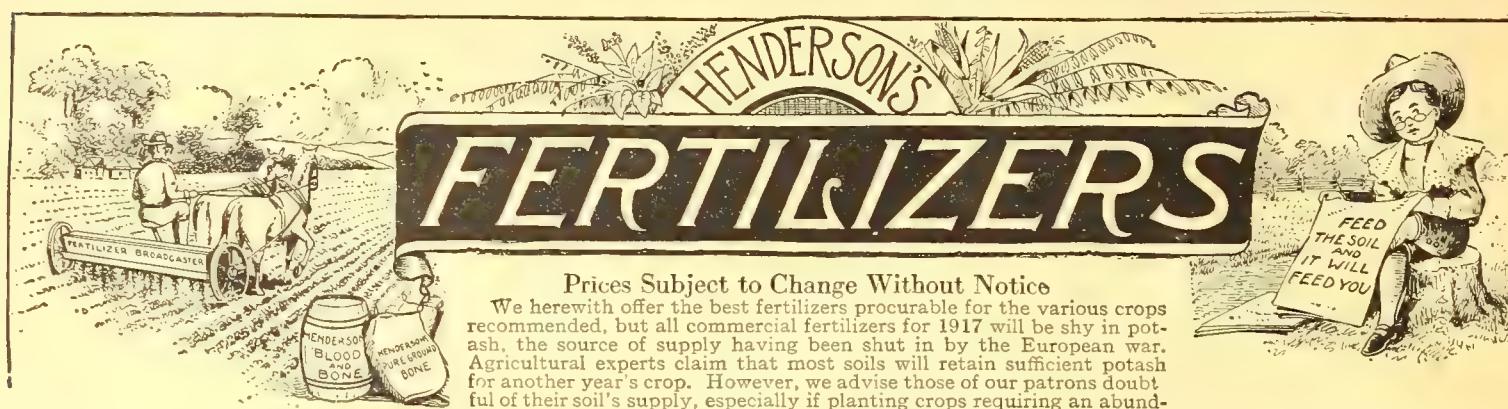
"Your 'Weed Destroyer' is a boon to us here with our numerous garden walks and carriage drives to be kept clean and free of weeds. It used to be hoe, hoe, hoe, from morning till night, all summer long, but the last two seasons by sprinkling the walks thoroughly in the spring with your 'Weed Destroyer' diluted with water, it has kept the weeds and moss away and the walks in apple pie order."

CHAS. MCGRATH, Jr., Newton, Mass.

"Climax" Lawn Sand

A non-poisonous, dried chemical, which evenly distributed at about 4 ounces per square yard kills weeds by adhering to their broad flat leaves, but falling to the roots of the grass is absorbed by the soil and so fertilizes the fine grasses that a permanent growth quickly covers the portions previously occupied by weeds and moss.

Grass dressed with "Climax" Lawn Sand is thicker in growth, finer in texture and richer in color. It is marvelous how quickly the grass responds and how lasting the improvement. Price, 3½ lbs., 70c. (mail weight 4 lbs.); 7 lbs., \$1.10 (mail weight, 8 lbs.); will dress about 25 square yards; 14 lbs., \$1.75; 28 lbs., \$3.00; 56 lbs., \$5.00; 1 cwt., \$9.00.



Bone Fertilizers

Decompose slowly in the soil, and therefore form excellent permanent improvement, less likely than any other fertilizer to waste. With bone there is no danger of burning the plants. Excellent for top-dressing lawns and grass lands, for garden and field crops.

Quantity required. For lawns, pasture and mowing lands, $\frac{1}{2}$ to 1 ton per acre. For trees and vines, 2 to 4 quarts each. For field and garden crops, $\frac{3}{4}$ to 1 ton broadcasted and harrowed in. For rose beds, pot plants, etc., one part to about fifty of soil.

Raw Bone Meal. This is ground very fine, decomposes more rapidly in the soil than the coarser grades, and is therefore more quickly beneficial.

Price. 1-lb. package, 15c. (mail weight 2 lbs.); 5-lb. package, 35c.; 10-lb. package, 60c.; 25-lb. bag, \$1.25; 50-lb. bag, \$2.00; 100-lb. bag, \$3.50; per ton of 2,000 lbs., \$55.00.

Raw Ground Bone. This is moderately fine and particularly adapted for general fertilizing; the finer particles are immediately beneficial, the coarse keeping up the supply of plant food for a long period.

Price. per 100-lb. bag, \$3.50; per ton of 2,000-lbs., \$55.00.

Blood and Bone

A very high grade fertilizer and superior for immediate as well as for prolonged results; it is of exceptional value for garden crops, root crops, corn, grain, grasses, fruit trees, small fruits, grape vines, and, in fact, all vegetation.

Quantity required. When broadcasted and harrowed in use from $\frac{1}{2}$ to 1 ton per acre. For garden crops drill in 300 to 500 lbs. per acre.

Price. per 100-lb. bag, \$3.50; per ton of 2,000 lbs., \$50.00.

Imported English Fertilizers

CLAY'S FERTILIZER. Price, 14-lb. bag, \$1.25; 28-lb. bag, \$2.25; 56-lb. bag, \$4.00; 112-lb. bag, \$7.00.

THOMSON'S VINE, PLANT AND VEGETABLE MANURE. Price, 28-lb. bag, \$1.75; 56-lb. bag, \$3.50; 112-lb. bag, \$6.75.

THOMSON'S SPECIAL CHRYSANTHEMUM AND TOP-DRESSING MANURE, 7-lb. bag, \$1.50; 14-lb. bag, \$2.50; 28-lb. bag, \$4.00; 56-lb. bag, \$7.00.

Prices Subject to Change Without Notice

We herewith offer the best fertilizers procurable for the various crops recommended, but all commercial fertilizers for 1917 will be shy in potash, the source of supply having been shut in by the European war. Agricultural experts claim that most soils will retain sufficient potash for another year's crop. However, we advise those of our patrons doubtful of their soil's supply, especially if planting crops requiring an abundance of potash, to apply in addition to the fertilizer used, not less than 1,000 pounds of wood ashes per acre, or 3 to 5 pounds per 100 square feet. Mucky, and light or sandy soils usually need potash.

Quantity of potash, to apply in addition to the fertilizer used, not less than 1,000 pounds of wood ashes per acre, or 3 to 5 pounds per 100 square feet. Mucky, and light or sandy soils usually need potash.



Strictly high-grade, highly concentrated, fine, dry and free from objectionable odor, containing all the elements needed by vegetables and flowers for their quick growth, early maturing and perfect development. The ingredients are quickly soluble and immediately commence to feed the plants, stimulating them into healthy, luxuriant growth, and feeding them until the end of the season.

Easily applied, either before or after planting, by sprinkling over the surface of the soil and raking in. If something especially fine in vegetables and flowers is desired, two or three additional applications, at intervals, will produce magnificent results. A 10-lb. package is sufficient for a space 15x20 ft. for one application, or 500 to 600 lbs. per acre. Instructions on each package.

Price. 5-lb. package, 35c.; (mail weight 6 lbs.) 10-lb. package, 60c.; (mail weight 11 lbs.) 25-lb. bag, \$1.25; 50-lb. bag, \$2.00; 100-lb. bag, \$3.50; per ton, \$55.00.

Henderson's Superior Fertilizer for House Plants

A safe, clean and high-grade fertilizer, free from disagreeable odor, prepared especially for feeding plants grown in pots. It is a wonderful invigorator, producing luxuriant, healthy growth, foliage of rich texture and larger and more brilliant flowers. Detailed directions on each package.

Price. 12-oz. package, sufficient for 25 ordinary-sized plants for one year, 25c. (mail weight 1 lb.)

Pure Animal Manures

Convenient, compact, high-grade natural manures dried and ground or pulverized, very nutritious, immediate and lasting in effect. They make rich Liquid Manures.

Quantity Required. For garden and field crops, 1 to 2 tons per acre— $\frac{1}{2}$ before plowing, the balance before harrowing. For top-dressing grass, use 1 ton per acre, applied in fall or early spring.

SHEEP MANURE PULVERIZED. Price, 50-lb. bag, \$1.50; 100-lb. bag, \$2.50; per ton of 2,000 lbs., \$36.00; in packages of 2 lbs., 20c. (mail weight 3 lbs.); 5 lbs., 35c.; (mail weight 6 lbs.) 10 lbs., 60c.

HORSE MANURE DRIED. Price, per 100-lb. bag, \$2.50; 500 lbs., \$10.00; per ton of 2,000 lbs., \$36.00.

CATTLE MANURE, DRIED. Price, \$2.00 per 100-lb. bag; \$30.00 per ton.

GENUINE PERUVIAN GUANO. Valuable for its Nitrogen which is a stimulator for both flowers and vegetables. Price, 1-lb. tin, 30c.; 5-lb. tin, \$1.00; 10-lb. bag, \$1.50; 25-lb. bag, \$3.00; 50-lb. bag, \$4.50; 100-lb. bag, \$7.50.

Ashes, Canada Hard Wood

Drive away insects and improve the texture of the soil; indispensable for all crops requiring potash; very beneficial for garden and field crops, grass lands and lawns. Apply 1 to 2 tons per acre.

Price. per 100-lb. bag, \$2.00; per bbl. of about 200 lbs., \$3.50; per ton of 2,000 lbs., in bbls., \$30.00.

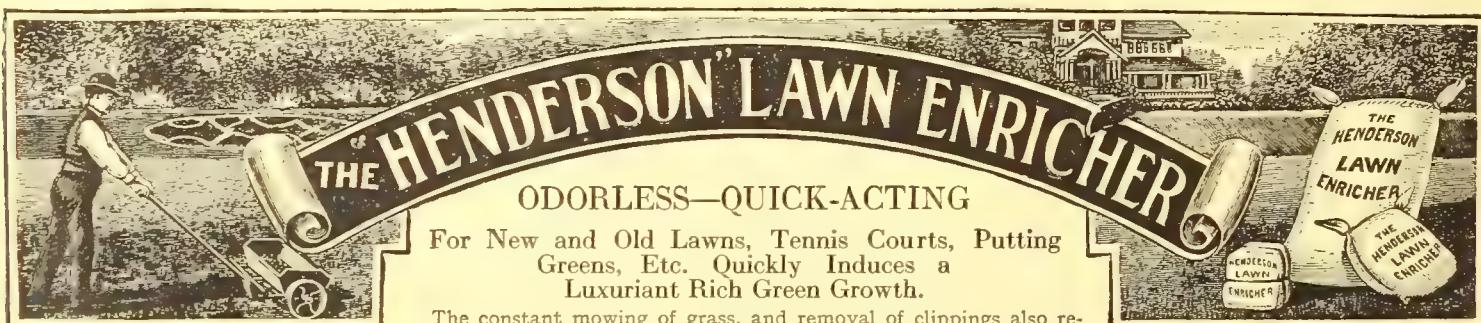
Commercial Fertilizers

The highest grade commercial fertilizers made.

	Price per 100 lbs.	2,000 lbs.
Potato Manure.....	\$2.75	\$45.00
Corn Manure.....	2.75	45.00
Special Truck Manure for vegetable crops.	3.00	52.00
General Crop Compound.....	2.50	42.00

HENDERSON'S GARDEN GUIDE AND RECORD

revised, re-written and brought up to date—Price, 25c.—is sent free with all orders amounting to \$2.00 or over. It tells all about garden ground preparation, and fertilization. It also shows how much Nitrogen, Phosphoric Acid and Potash are consumed by various crops, thus indicating what fertilizer the land requires.



QUANTITY REQUIRED

For forming a new lawn a 10-pound package is sufficient to go over an area of 300 square feet, or 1000 to 1500 pounds per acre, or a smaller quantity for renovating an old lawn. Apply broadcast with machine or by hand as evenly as possible on a quiet day and preferably just before rain. If applied during the summer use half of the quantity and during rainy weather or water in thoroughly with a hose. The use of "Henderson Lawn Enricher" entirely does away with the old practice of top-dressing lawns with stable manure, so objectionable on account of unsightliness, disagreeable odors, so often full of weed seeds.

ODORLESS—QUICK-ACTING

For New and Old Lawns, Tennis Courts, Putting Greens, Etc. Quickly Induces a Luxuriant Rich Green Growth.

The constant mowing of grass, and removal of clippings also removes a proportion of digested plant food. Therefore if the luxuriance of a lawn is to be maintained, it must be top dressed, at least once a year, with suitable fertilizer. The Henderson Lawn Enricher is a clean and odorless lawn dressing which never fails in inducing a rapid and rich green growth. It should be sown broadcast in the spring or fall, and a remarkable improvement will soon be observed. If applied during the summer use half of the quantity and during rainy weather or water in thoroughly with a hose. The use of "Henderson Lawn Enricher" entirely does away with the old practice of top-dressing lawns with stable manure, so objectionable on account of unsightliness, disagreeable odors, so often full of weed seeds.

PRICES—by Express or Freight—

(Purchaser paying transit charges.)	
5-pound package (mail weight 6 lbs.)	\$.35
10-pound package (mail weight 11 lbs.)	.60
25-pound bag	1.25
50-lb. " "	2.00
100-lb. " "	3.50
Per ton of 2000 pounds	55.00

Henderson's Special (Planet, Jr. No. 24) Hill and Drill Seeder.

PRICE, \$10.00.

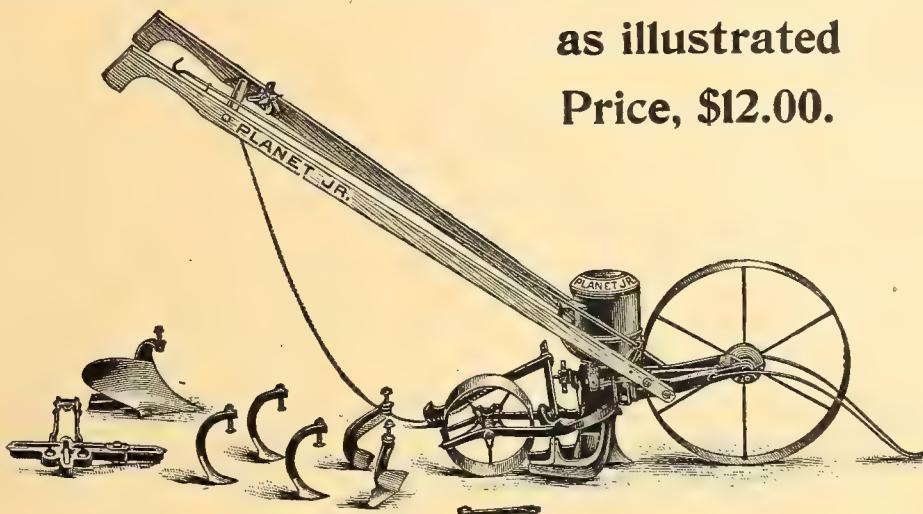
Or Combined as a Single Wheel Hoe, Cultivator and Garden Plow

as illustrated

Price, \$12.00.



NOTE
THE LOW
PRICES.



Packed Weight

49 lb.

This implement is a first class Seeder, holding one quart of seed. It will drop all garden seeds, even peas and beans, in hills 4, 6, 8, 12 or 24 inches apart or sow in drills with great regularity in a narrow line to any exact depth required. It opens the furrow, drops the seed, covers it, rolls it down and marks the next row all at one passage as fast as the operator can walk. As a Single wheel Hoe, Cultivator and Garden Plow it is unsurpassed being furnished with one pair of hoes, three cultivating teeth one large garden plow and one double leaf guard. When used as a cultivator &c., the seeder is entirely removed making a light, handy and practical implement. The steel driving wheel is 13 inches in diameter.

SPECIAL SUGGESTIONS.

Ground intended to be planted with a Seed Sower or cultivated by a Wheel Hoe should be fine, free from trash, and should be well leveled by raking or rolling.

Set up the machine as shown in the cut.

To set the Seeder. Before putting in the seed, move the index finger beyond the line on the scale corresponding to the number of the seed to be sown, and then adjust the finger accurately to that line, by screwing forward the brass thumbscrew. For instance, to sow onions in drills, adjust the finger accurately to Fig. 12. To sow onions in hills, make it point to Fig. 10, then after pushing the feed rod all the way down, put in the seed.

To Start Sowing, pull up the feed rod on the handles as far as it will go, so that the index finger presses against the thumbscrew.

To cut off the flow of seed, push the feed rod all the way down.

Hill Dropping. There are three spacing wheels; two of them double. Use the six-tooth spacer for four inch hills; the four-tooth for six inch; the three-tooth for eight inch; the two-tooth for twelve inch; and the one-tooth for twenty-four inch hills.

To Sow in Drills. Raise the piece which engages with the spacing wheels, and push it over to the left until it drops into the notch provided to hold it open.

When set according to the index if the drill sows thicker or thinner than desired the amount can be adjusted accurately by the thumbscrew. As different varieties of seed of the same name especially peas and beans vary greatly in size and the number wanted per foot also varies it is much better to test the Seeder before using it on a strip of cloth or other good surface, moving the set-screw and pointer as needed. Test it at the speed of a moderate walk. Shut off the feed, when the machine is stopped by means of the feed rod.

TO CHANGE FROM A SEEDER TO WHEEL HOE, CULTIVATOR &c.

Turn the machine up side down, resting it on the wheel and handles, take out bolt that fastens wheel arms to the drill, then lift out the drill and substitute the tool frame.

This machine hoes to or from, deep or shallow, finishing at one passage the space between all rows from six to sixteen inches apart, at the speed of a moderate walk.

Adjust the handles to the most comfortable height after loosening the bolts in the slots and then secure them firmly, by tightening the nuts.

The Wheel Hoe may be pushed straight ahead, though it is better to use it with successive strokes from six inches in length for delicate work, to the whole length of a step in other cases; but in either case moving at the speed of a moderate walk. Do not watch the blades, but the wheel only.

Leaf Guard. Use this only when plants are so spreading that the wheel would injure the leaves.

Change depth of work by raising or lowering the frame, first loosening the bolt that holds the frame.

First, hoeing between small plants; use the D hoe on the left side and the C hoe on the right. Set two to three inches narrower than the distance between the rows.

To hoe both sides at once, put on the extension on the right side of the frame and use the C hoe on the left and the D hoe on the right of the row.

Second hoeing, use the C hoe on the left and the D hoe on the right side, between the rows.

If wide rows require two passages, first hoe out the middle, hoes close together, and then finish next to the crop, hoes wide apart.

Rakes are supplied as an extra. Use the three-tooth rakes for six inch rows, the five-tooth for the nine and ten inch, the seven-tooth for twelve inch rows, and the three and five together for fourteen, etc. The five and seven-tooth together for leveling ground and raking trash.

Cultivating. Use all three teeth in the main slot; or put the centre one in the rear end of slot, when wishing to hill the crop, with all the points set downward.

Use a single tooth for marking out rows for Onion Sets, Peas, Beans, etc.

Plowing. Open furrows with the plow by going twice in a furrow and cover by throwing a light furrow from one side, then a heavy one from the other. Plow away from crops with plow on left side and towards them in right side of frame.

Keep the blades sharp and bright, and they will work like a charm.

With care in following the directions at first, a little practice will render the work easy and delightful.

The Henderson System of Lawn Making

HOW TO MAKE A LAWN—By Peter Henderson

Digging
Draining
Grading
Fertilizing

Seeding
Mowing
Rolling
Renovating



THE VALUE OF A LAWN. That an expanse of smooth green turf, surrounding a dwelling in a distinct asset, adding much to the appearance, and therefore the value of a house is generally admitted; but not infrequently we see, after dwellings costing it may be from five to thirty thousand dollars are erected, that the grounds surrounding it are left to the tender mercy of some incompetent to grade and put in shape. The architect's duties usually end with the completion of the building, and very often the contractor is commissioned without any particular instructions to make the lawn. This frequently results in the beauty of the place being marred—for this matter requires both intelligence and good taste, and if the lawns are of great extent some knowledge of the principles of landscape gardening.

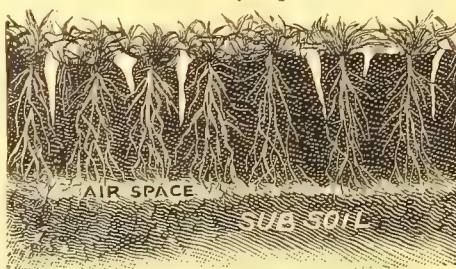
The character of the turf which is to form the "green carpet" is the first and most important consideration, for unless this be of the best, all the subsequent labor will be in vain. The matter resolves itself into the question—what grasses are the most suitable for forming a perfect lawn? The answer is "turf-forming" grasses, which will form a closely interwoven, firm, deep and elastic turf; growing so closely that weeds are unable to obtain a foothold. All "bunch grasses" that is, all grasses that form tussocks, by growing in separate clumps, must be rigidly excluded from any combination of grasses for a lawn.

GRASS SEED MIXTURES. There are hundreds of varieties of grasses but only about sixteen of them are suitable for use in making a lawn, and a perfect and enduring lawn cannot be made by sowing any single one of these varieties. Kentucky Blue Grass for instance which is sometimes recommended for lawns grows but sparsely during midsummer, is slow to form a close sward—requiring two years to do that; and loses color in hot weather. A good lawn can only be made by sowing a combination of grasses so arranged that they arrive at their best during different months of the year, one kind constantly succeeding another

so that perpetual verdure is maintained. Another great advantage secured by sowing mixtures, is that the plant food in the soil is made use of to the fullest extent, because such grasses, having different root formations—some being shallow rooted and others deep rooted in habit—seek their food at different levels, and treble the usual number of plants are able to grow on every square foot of land. Thus a close turf is formed which takes entire possession of the soil to the exclusion of all weeds, and a perfect lawn is produced which is constantly covered with a carpet of living green. The **Henderson Lawn Grass Seed** is a combination of just such grasses as those described. It is the fruit of years of experience and **close study of American conditions** and is undoubtedly the best for the **American climate**.

GRADING. One of the first conditions for a perfect lawn is, that the land be perfectly drained either naturally or artificially. If the subsoil is sand or gravel, so the water can quickly pass through it, then there will be no need for artificial drains, but if there is a stratum of adhesive clay for a subsoil then drains are indispensable every fifteen or twenty feet. As the formation of the lawn is the foundation of all subsequent operations, it is imperative that it be carefully done; for if badly done at first it cannot be changed or altered, unless to the great detriment of trees or shrubs that have been planted or flower beds or walks that have been laid out.

The first thing to be done is to get the ground shaped to the desired grade, taking care in grading that when hills or rocks are removed, sufficient subsoil is also removed to be replaced with top soil, so that at least five inches of good soil will overlay the whole in all places; and where trees are to be planted there should be twice that depth of good soil. When the grading is finished, if the nature of the ground requires it, drains should be laid where necessary; then the whole should be thoroughly plowed, a subsoil flowing in the wake of the common plow, until it is completely pulverized. A heavy harrow should then be applied until the surface is thoroughly fined down; all



THE IMPORTANCE OF ROLLING.

In the winter time, alternate thawing and freezing causes the ground to heave, leaving air spaces and fissures exposing tender feeding roots to the air which dries them out and kills them. Also in very hot weather the ground bakes, and cracks appear which lead down to the roots. These must be closed up by thorough rolling or the roots are killed.

HOW TO MAKE A LAWN—Continued

stones, roots, etc., should be removed, so that a smooth surface may be obtained. We have used, with great effect and saving of labor the Imported Scotch Chain Harrow, which fines and levels the land equal to a steel rake; and wherever large areas are in preparation for lawns, or in fact for any field culture, requiring a fine smooth surface, this implement will be found to be of great value.

For small plots, of course, digging, trenching and raking must be done instead of plowing, subsoiling and harrowing, and the surface after sowing should be patted down with the back of a spade or rolled with a roller.

FERTILIZING. The question of fertilizers for the lawn is an important one. Perhaps the best way to apply *well-rotted* stable manure is to spread it thick enough to cover the ground after plowing or digging, and then harrow or rake it in. Though a little more costly, the best plan to insure permanency for the lawn is to use from 1,500 to 2,000 lbs. per acre of coarse Ground Bone or better still, about the half the above quantity of bone and the other half of the Henderson Lawn Enricher, or in that proportion over lesser areas. The bone decomposes slowly, giving lasting enrichment; while the Lawn Enricher gives immediate results, the combination of these two fertilizers is perfect in effect, insuring a "velvet lawn," under ordinary circumstances, for several years without further application of manure. To insure even distribution, the fertilizers could be applied in the manner recommended for sowing lawn seed on this page. The quantity of fertilizer required for each 8 ft. x 8 ft. square is $2\frac{1}{2}$ lbs., or 25 lbs. for 10 squares.

When the land has not been fertilized before sowing, it is necessary to use top-dressing of manure each season to keep up the fertility of the lawn, and nothing is better for this purpose than *well-rotted* short stable manure to spread over it late in the fall (November or December) enough to partially cover the surface. On no account should *fresh* stable manure be used, or the lawn will be very apt to be ruined by the introduction of weed seeds. This should be allowed to remain on until such time as the grass shows signs of starting in the Spring, when the rough portion should be raked off and a heavy roller applied, so that the surface of the lawn be rendered smooth and firm for the mower. If the top-dressing of *well-rotted* stable manure has been omitted in the Fall, fine bone dust mixed with finely sifted wood ashes, in equal parts may be sown on the lawn about as thick as sand is usually strewn on the floor, and rolled down, and we advise that the lawn be rolled several times during the Spring.

SEEDING. In the latitude of New York the seed may be sown any time from March 20th to June 20th. If the ground has been well prepared, and the weather is not too dry, a good lawn will be in evidence in 6 to 10 weeks time. Under very congenial conditions, new lawns are often ready for mowing in 6 weeks from sowing, and we have received hundreds of letters from customers announcing that 4 weeks from sowing their lawn was ready for mowing. When seed is sown during the hot months of June and July a sprinkling of oats may be sown at the same time to

protect the young grass from the sun, but water must be used copiously or failure is likely to result. Lawns are also sown during the fall months from August 20th to October 15th with excellent results.

Sow the seed on the newly raked or harrowed surface, but do not sow on a windy day or much of the seed will be lost. Also do not sow seed when the soil is wet, or much is lost during the necessary rolling, and besides the perfect level desirable will be destroyed.

THE BEST METHOD OF SOWING. We illustrate on this page a method of sowing which will enable the operator to avoid sowing the same place twice and also prevent him missing any part of the ground.

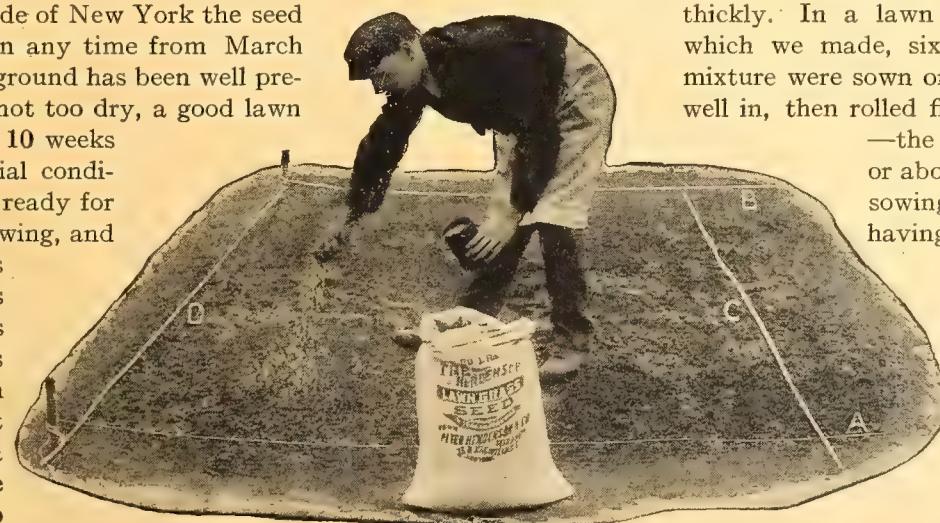
The two garden lines A and B are stretched across the plot—the ends being attached to stakes. The lines are placed 8 feet apart. Then the rods C and D are laid across, these also being 8 feet apart. The space thus enclosed 8 x feet is then sown with seed, and the rod D is lifted and placed 8 feet in advance of C, and that space is also sown. The rod C is lifted and placed 8 feet in advance of D and so on until the entire width has been sown. Then line A is lifted and placed 8 feet the other side of line B, the rods are again placed in position another strip is sown, and so on until the lawn is completed. For each square about a pint of seed should be used, if quick results are desired. Less than this is usually allowed viz. 1 quart to 300 square feet, or 5 bushels to the acre, but there is no arbitrary rule. After all the seed is sown cover with soil about $\frac{1}{4}$ in. deep. This may be accomplished by raking the surface first in one direction and then in an opposite one. Do not bury the teeth of the rake too deeply. When the raking is finished roll the ground thoroughly with a heavy iron roller, also in two opposite directions.

For seeding lawns of large area we advise the use of the "Velvet-Lawn" Seeders. These valuable machines, of recent invention, greatly facilitate the seeding of extensive grounds, such as Golf Courses, Tennis Courts, Putting Greens, etc. There is also the "Velvet-Lawn" hand-power for use on smaller places, which is wonderfully efficient, putting the seeds into old sod or newly prepared ground with great evenness whether the day be windy or not.

QUANTITY OF SEED REQUIRED. As a guide for the proper quantity of seed required to form a perfect lawn, we may state that one quart of Lawn Grass mixture is sufficient to sow an area of 20 feet by 15 feet—300 square feet—or to cover an acre five bushels will be required. It should be borne in mind that in order to produce the best results, grass seed for lawns should be sown thickly. In a lawn of about an acre in extent, which we made, six bushels of the "Henderson" mixture were sown on the 25th of April harrowed well in, then rolled firmly with a heavy iron roller

—the result was that by July 1st, or about sixty days from the date of sowing—a perfect lawn was obtained, having had to be twice mowed previous to that date.

MOWING. The young grass will be up in about a week if sown in the fall, and in about two weeks if sown in the spring, depending of course upon the prevailing weather. When the grass is nearly



HOW TO MAKE A LAWN—Continued.

two inches high, it should be rolled with a light weight roller, to firm the soil, and when over 2 inches in height it is ready for the lawn mower.

The knives should be set high for this first cutting, so as not to cut it off too close to the ground. The best machine on the market is the Henderson Ball Bearing Lawn Mower. From this time on until growth is retarded in the fall, the lawn should be regularly mown every week, so as to induce the grass to spread out over the surface, instead of growing up tall and leaving bare spots. Any bare spots should be repaired as soon as observed, by scratching the ground, putting in a handful of seed and covering in the usual way. When a lawn is mown regularly the clippings may be left on, and as the sun soon shrivels them up they never appear unsightly, also they protect the roots of the young grass from the hot sun.

If the grass is allowed to get long then the clippings should be raked off or caught in a grass-catcher which may be attached to the mower. In the early stages of the growth of a lawn, it will be found very beneficial to top-dress it, by scattering broadcast a compost of sifted soil and sand and the Henderson Lawn Enricher using 25 lbs. of the latter to a cartload of the former. It often happens that the soil contains weed seeds of various species and among them crab-grass, known also as five-fingered grass. Like many of the others this is annual, and if not allowed to seed, may ultimately be eradicated. But as it is prostrate in growth it should be loosened up with a rake and the scythe used two or three times during the season. Whatever means are employed it must be cut out, and lawn grass seed thickly sown in its place, so that it will not be able to obtain a footing the following year.

ROLLING. The benefit derived from using a roller on the lawn, especially in the spring is not fully understood. The action of freezing and thawing causes the ground to heave, and we may sometimes see hardy plants so forced up that their roots are destroyed. A lawn is just a collection of millions of little plants and they suffer in the same way unless the ground is firmly pressed back with a roller before hot weather comes. For use on the lawn always take a "two or three section"

roller, as they can be turned without injuring the grass. A 300 lb. roller is about as heavy as one man can pull, though a 400 lb. will be better if you have two persons to operate it.

RENOVATING. To renovate lawns that have become worn out by neglect or other causes, and where it is not convenient or de-

sirable to renew by plowing up, they may be greatly benefited by first mowing the grass as closely as possible. Then top dress with the Henderson Lawn Enricher using $1\frac{1}{4}$ pounds to every square of 9 ft. x 8 ft. or a 5 lb. pack-

age for 4 spaces. This must be well raked in, or if the lawn is large, harrowed in, with a light steel harrow, so as to open up the soil. Unless this is done

the roots of young grass cannot penetrate the old soil. Sow over the raked surface about half the quantity of Lawn seed used in sowing a new lawn. After sowing the surface should be harrowed or raked over, and firmly rolled or beaten down, but if spurious grass or other weeds have got possession of lawn, then this way of renovation would not be satisfactory, and it had better be plowed under and sown afresh, in the manner already given for the formation of the lawn.

STIMULATING. Where very quick results are required, or in case a lawn is becoming bare or patchy in spots, caused by wear and tear or otherwise, the grasses may be forced into a quick growth by applying Nitrate of Soda at the rate of 100 lbs. per acre.

If put on in the dry state it should be applied just before a shower, otherwise it is apt to burn the grasses; but the safer plan is to dissolve one pound of the nitrate in thirty to forty gallons of water and sprinkle with the solution.

The Henderson Lawn Enricher is always successful in inducing a new growth on worn-out lawns, and is much safer to use, there being no danger of burning the grass, whether used in spring or autumn. Apply as recommended in the instructions for Renovating.

SHADY LAWNS. When a lawn is much shaded either in whole or in part, the shaded portions should be sown with Henderson's Shady Nook Lawn Grass Mixture, which is a combination of fine dwarf growing evergreen varieties, which in their wild or natural state are to be found growing in the woods or other sheltered or shaded spots.

In the immediate neighborhood of large trees, fertilizers should be applied frequently, for the trees absorb the fertilizer and impoverish the ground.

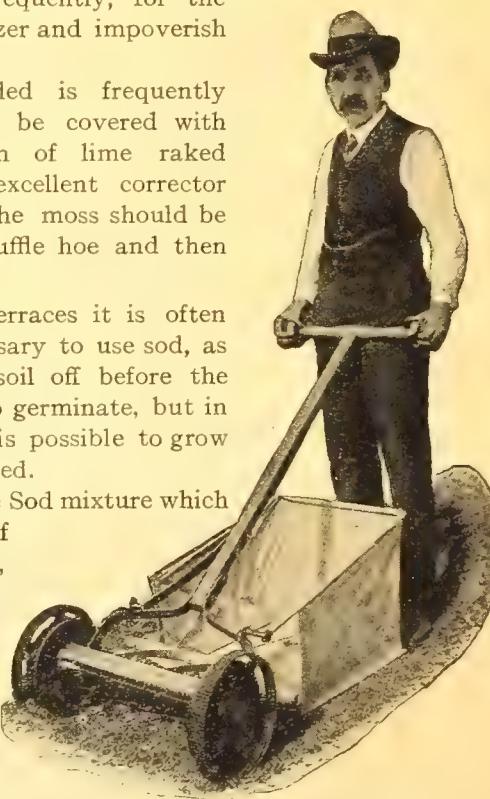
Ground much shaded is frequently sour, and is apt to be covered with moss. An application of lime raked into the soil is an excellent corrector and sweetener, but the moss should be first cut off with a scuffle hoe and then thrown away.

TERRACES. On terraces it is often necessary to use sod, as the rains wash the soil off before the grass seed has time to germinate, but in favorable weather it is possible to grow grass on them from seed.

Henderson's Terrace Sod mixture which we offer is composed of deep-rooting grasses, which, if once established, will hold the soil and prevent washouts. We advise liberal fertilizing and seeding so that the grasses may be quickly established.

VELVET LAWN
HAND-POWER SEEDER

HENDERSON'S WATER BALLAST ROLLER



THE HENDERSON BALL-BEARING LAWN MOWER

The "HENDERSON" LAWN GRASS Seed

FOUR WEEKS
FROM SOWING

IT IS READY
FOR MOWING



THE MOST BEAUTIFUL LAWNS IN AMERICA ARE MADE WITH

The "Henderson" Lawn Grass Seed.

The "Henderson" Lawn Grass Seed has been the means of adorning innumerable American homes with what has been aptly described as the "GAIETY OF GRASS," that finishing touch to the home beautiful which is so essential and necessary—a perfect and enduring lawn. That home-owners in all parts of the United States appreciate and value at its true worth this celebrated mixture is evidenced by the large number of letters of recommendation annually received by us. A few of these we print in our catalogue and as will be seen, they not only confirm our somewhat conservative claims as to the value of this far-famed lawn mixture, but go further than we have hitherto done in praise and commendation. The "Henderson" Lawn Grass Seed has been thoroughly tested by country-wide use, for more than half a century. It is the fruit of years of experience and close study of American conditions, and is undoubtedly the best for the American climate.

HOME OWNERS IN ALL PARTS OF THE U. S. PRAISE THE "HENDERSON" LAWN GRASS SEED

"My lawn is the finest in town. I made it 25 years ago and got the seed of you. No velvet carpet is softer. I use hardwood ashes and phosphate twice a season, and in early spring sow broadcast The 'Henderson' Lawn Grass Seed, and roll it."

D. R. SMITH, Adams, Mass.

"I am becoming firmly convinced that there is but one good grass seed, Henderson's Lawn Grass Seed."

NATH'L. R. BRONSON, Waterbury, Conn.

"Wish to say that I had great luck with your Lawn Grass Seed last year. It was O. K. Had fine lawn in about six weeks from time of planting. Could have mowed it with lawn mower had I wanted to."

J. C. BARSTON, Willimantic, Conn.

"Your Grass Seed is indeed a wonder, both for quick growth and for beauty."

C. N. LAWS, Rapid City, S. D.

"The Henderson Lawn Grass Seed is the best that ever come to Deadwood."

W. J. THORNBY, Deadwood, S. D.

"Your Lawn Grass Seed has given great satisfaction in the past, and we are desirous of continuing its use."

LIVINGSTON MANOR CORP. New Brunswick, N. J.

"I am highly pleased with the Lawn Grass Seed. In my opinion it is the best I have ever used."

PETER LANE, Sedalia, Mo.

The "Henderson" Lawn Grass Seed is composed of fine-leaved dwarf Grasses, which produce closely interwoven, deep and elastic turf that maintains from year to year lawns of enduring green, dark, rich and luxuriant. This continuous covering of verdure is obtained by including in the mixture Grasses, which arrive at their best during different months of the year, one variety constantly succeeding another. It is impossible to make an enduring lawn by sowing seeds of a single variety which will only grow vigorously during a portion of the year.

The "Henderson" Lawn Grass Seed is in reality as cheap as any other, notwithstanding its superior quality. For while many mixtures on the market weigh only 14 lbs. to the bushel. The "Henderson" Lawn Grass Seed weighs 20 lbs. per bushel, being entirely free from chaff and other foreign matter. The quantity required for new lawns is 5 bushels per acre. For a plot 15x20, or 300 square feet, use 1 quart. For renovating old lawns, use one-half of above quantities. Full instructions in every bag and package.

"I would like you to mail me your catalogue containing description of your Lawn Grass Seed. I have used it for the past two years and all who have seen it say it is the finest looking lawn in this city."

THOMAS A. LEE,

112 Walcott St., Pawtucket, R. I.

"Really can't get along out here without Henderson's Lawn Grass Seed. Two years ago I sowed my lawn with your seed. It is far ahead of anything else in the neighborhood."

HERBERT HUNT,

3730 No. 28th St. Tacoma, Wash.

"The 'Henderson' Lawn Grass Seed used on my lawn is 'Dandy' and I have a lawn as smooth and velvety as a carpet."

CHAS. E. MASON,

Birmingham, Ala.

"The Lawn Grass Seed I purchased from you last spring did fine. I have a fine set of grass on my lawn and am well pleased."

J. J. NELSON,

Palmyra, Mo.

"Your seeds have always given satisfaction. I have a large lawn sown with the 'Henderson' Lawn Grass Seed, and it is much admired."

Dr. FANNIE GOSDEN,

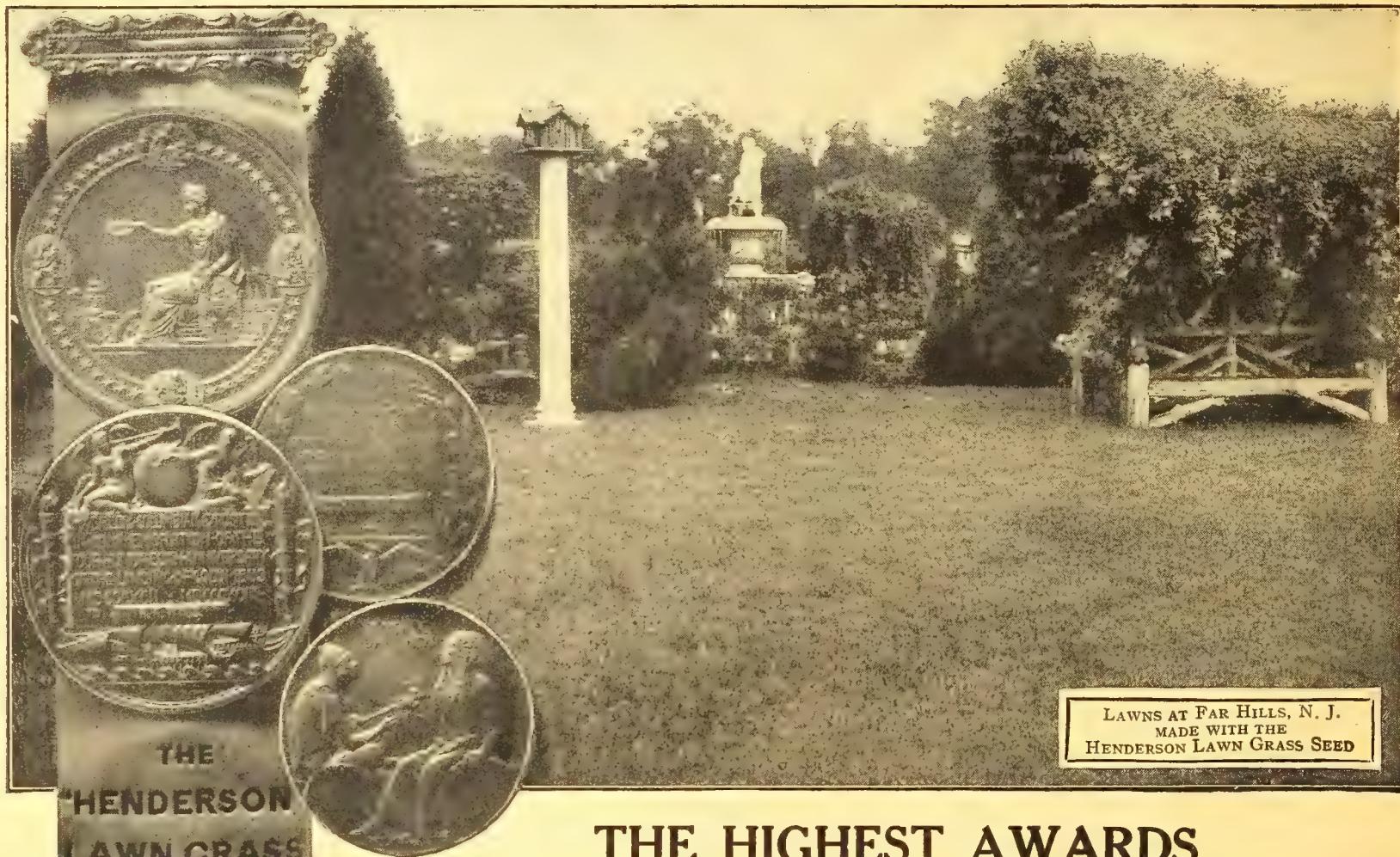
Farley, Ia.

PRICE OF THE "HENDERSON" LAWN GRASS SEED. DELIVERED FREE IN THE U. S.

30c. per quart. 55c. for 2 quarts. \$1.00 for 4 quarts. \$1.75 per peck. \$6.00 per bushel of 20 lbs.

We Deliver quarts and pecks **FREE** in the U. S. by Parcel Post or Express at our option.

Bushels and larger quantities we deliver **FREE** by Parcel Post, Express or Freight at our option.



THE
HENDERSON
 LAWN GRASS

AWARDED

Gold Medals
 AT THE
COLUMBIAN
 Pan-American
 AND
JAMESTOWN
 Expositions

THE HIGHEST AWARDS

In the Gift of the Judges Has Invariably Been Won by the Lawns Made With

The "Henderson" Lawn Grass Seed

Besides its country-wide use on the home grounds of the people The "Henderson" Lawn Grass Seed has invariably been chosen to produce lawns at the International Expositions held in the United States—notably the Centennial at Philadelphia, the Columbian at Chicago, the Pan-American at Buffalo, the Lewis & Clark at Portland, and the Jamestown at Norfolk. At all these great industrial congresses it has been our privilege to furnish the emerald setting for many of the beautiful edifices designed by the great architects of the world.

The brilliant color scheme adopted for these

buildings—white, red and yellow—made these spacious green lawns most acceptable and restful to the eye, attracted the attention of every visitor and helped to make The "HENDERSON" LAWN GRASS SEED famous throughout the country.

As is usual at all these great undertakings everything was delayed to the last moment, and we were required to produce the lawns in a few weeks' time. We successfully accomplished this in from four to six weeks and as the superintendent of grounds at the Jamestown Exposition remarked, "It was a miracle in lawn making."

GOLDEN MEDALS MARK ITS TRIUMPHS

but we value still more the enthusiastic praise of our customers.

"The Henderson Lawn Grass Seed I sowed this spring has been the talk of the neighborhood. It required mowing in just four weeks from sowing to the very day. I am more than pleased with it."

G. S. KALLENBAUGH,
 Garfield, Ohio.

June 27, 1916.

"I enclose a couple of photographs showing my lawn for which I took first prize. It was planted with the Henderson Lawn Grass Seed."

J. E. WELLS,
 Philips Ave., Dayton, Ohio.

April 4, 1916.

"I sowed the Henderson Lawn Grass Seed last August and I mowed it in five weeks' time. There is no grass as good in Collingwood."

STUART W. FRAZER,
 Linwood Ave., Collingwood, N. J.

April 26, 1916.

"Enclosed please find order for lawn grass seed. I planted half a bushel of the Henderson Lawn Grass Seed last year, and I have the best-looking lawn in this locality. It was sown on barren ground and it exceeded all my expectations."

F. H. MAPLE,
 Bettendorf, Iowa

March 13, 1916.

"We were able to produce a fine set of grass with your Lawn Grass Seed, where there had never been a spear of grass before. I praise your seeds to everybody."

Mrs. C. J. RINEHART,
 Hurhurt St., Peoria, Ill.

February 22, 1916.

"While in Kentucky I saw a lawn in Henderson, Ky., which was the admiration of all who saw it. It was sown with your lawn seed mixtures."

H. W. C. AINLEY,
 Delores, Col.

March 5, 1916.

PRICE OF THE "HENDERSON" LAWN GRASS SEED (Delivered Free)

30c. per quart.

55c. for 2 quarts.

\$1.00 for 4 quarts.

\$1.75 per peck.

\$6.00 per bushel of 20 lb.

We deliver quarts and pecks free in the U. S. by parcel post or express at our option.

We also deliver free in the U. S. by parcel post, express or freight (our choice) all Lawn Grass Seeds in larger quantities.

Lawn Makers in All Parts of the United States

TELL OF THE BEAUTIFUL LAWNS MADE WITH

THE "HENDERSON" LAWN GRASS SEED.

"I want to express to you the satisfaction I have found with your Lawn Grass Seed. I planted the seed February 23rd, and by June 1st it had been mowed four times, and is a beautiful plot of grass. It is absolutely free from weeds, and as you represent. Next year I want my whole lawn planted with it."

Mrs. L. W. WORSHAM, Corinth, Miss.

"About fifteen years ago I bought some lawn seed of you and followed your instructions and had the best lawn in the City. I have a small lawn to fix up this year part new and part old, and want some more seed that will grow quick and make a nice lawn." E. K. CALLAHAN,

142 Winspere St., Buffalo, N. Y.

"The grass seed I bought from you some time ago is fine and dandy and a treat to look at. I have as fine a lawn for the first year as there is in the City and that is saying something." WILLIAM JONES,

64 Kulp St., Wilkes Barre, Pa.

"The lawn grass seed which you sent about April 15th was sowed immediately following its receipt, and is now up. It gives promise of producing a good lawn, something for which I have been striving for three years."

H. J. SAVAGE,

1227 Girard St., N.E., Washington, D. C.

"We cut our lawn grass six weeks from planting. It's some seed." Mrs. FORDHAM,

1229 Charlevoix St., Detroit, Mich.

"Late this Spring I purchased some of your lawn grass seed for my yard, and must say that I was agreeably surprised at its rapid growth and beauty. Same was not sowed until late, but I have the prettiest lawn in town." S. W. PICKENS, Hendricks, W. Va.



Home and Lawn of A. O. Surber, Clifton Forge, Va., showing new lawns seeded down with the "HENDERSON" LAWN GRASS SEED

These lawns are an excellent example of the benefits of Fall Sowing.

"I got a fine stand of grass from the Henderson Lawn Grass Seed on the lawns of my new home, a photo of which I send you. They were graded and seeded down in October. It is said to be the prettiest grass and the quickest growing in this section."

A. O. SURBER, Clifton Forge, Va.

"They can all talk about lawn seed, but there is none that can come up to yours. I have tried many kinds and yours can't be beat."

GUS J. KRAEMER, Hazel Crest, Illinois.

"In the early Spring we used about six bushels of your lawn grass seed with excellent results."

HUDSON COUNTY HOSPITAL, Secaucus, N. J.

"Your Lawn Grass Seed has certainly been very satisfactory. I gave you an order this spring, and certainly have a beautiful lawn now. Just about three weeks ago now I recommended your Grass Seed to Mr. Levi Plank, who sent you an order in consequence, and he now actually has grass at least two inches high. Your grass is certainly the thing for Kansas."

FRED L. TAYLOR,

Lyons, Kansas.

"I saw one of your lawns at Brookfield, Wash., and it was fine." LUMAN R. WING,

326 W. Madison St., Chicago, Ill.

"In your catalogue you say "Four weeks from sowing, ready for mowing." Well, after having my house built a year ago last summer I sent for some of the Henderson Lawn Grass Seed. Then I had the grading done with ordinary sandy loam and sowed the seed about the middle of August. In 21 days from the time of sowing I had to mow it. No one around have ever saw the like before."

CHESTER PLEIVES,

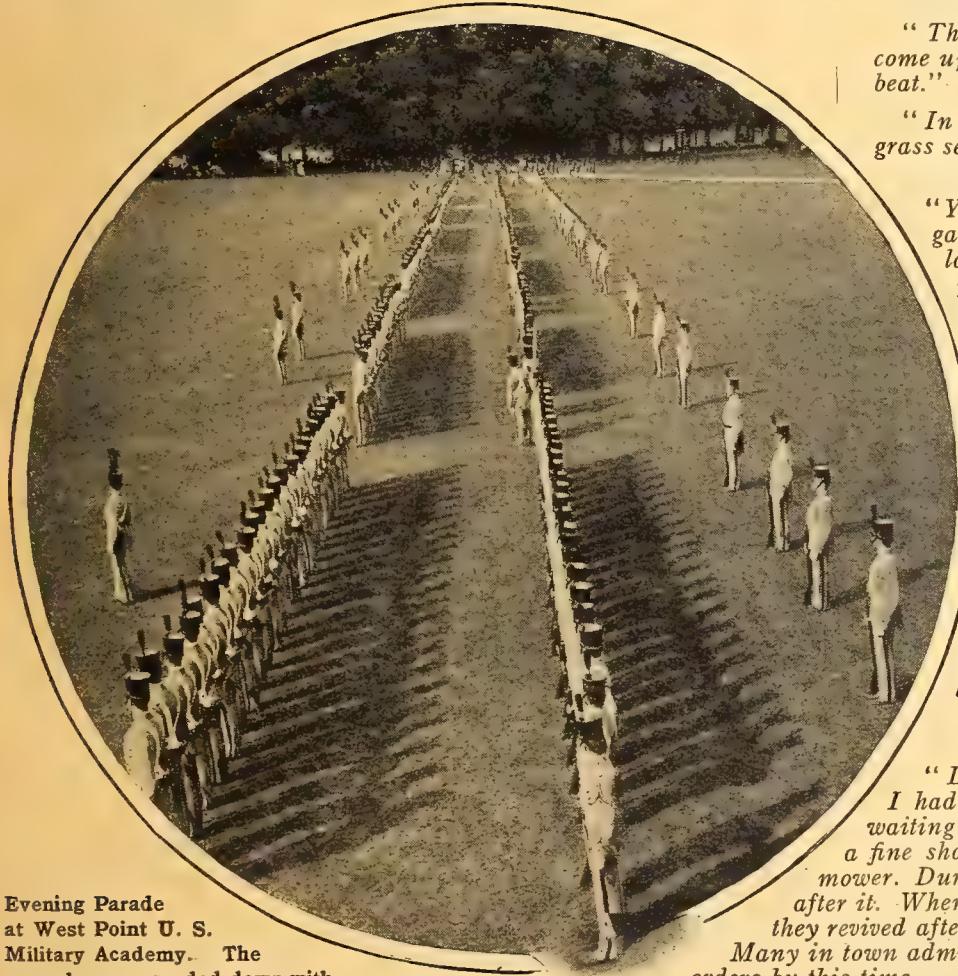
255 Simcoe St., London, Ont.

"Last Spring I bought the "Henderson" Lawn Grass Seed. I had to defer sowing it until late in the Spring on account of waiting for the cement sidewalk. Two days after it was in we had a fine shower, and within five weeks I went over it with the lawn mower. During the summer I was away for five weeks and no one looked after it. When I came back there were several places that looked dead, but they revived after a shower, and the lawn has grown luxuriantly ever since."

Many in town admire the lawn very much, and I suppose that you have their orders by this time.

REV. MARTIN OSSEWAARDE,
Sioux Center, Iowa.

Evening Parade
at West Point U. S.
Military Academy. The
grounds were seeded down with
the "Henderson" Lawn Grass Seed



Henderson's "Seaside" Lawn Grass Seed.

Along our seacoast there are many beautiful summer homes and resorts with such sandy saline surroundings that a turf of the favorite lawn Grasses cannot be produced. Our "Seaside" mixture will make a good turf of green on sand, though, of course, the sand must be top-dressed with not less than 2 inches of soil before even our "Seaside" Grass Seed is sown, to enable the young Grass to get a start, after which the long roots—peculiar to the varieties we use in this mixture—drive down deeply in the sand. Attention must be given to sprinkling during dry weather. Use not less than one quart for 300 square feet; 5 bushels per acre. Price, delivered free in the U. S. 25c. qt., 85c. for 4 qts., \$1.50 pk., \$5.00 bu.

"For several years I have ordered for laying down new lawns, and for renovating others, Henderson's Seaside Lawn Grass Seed. It has produced the best results."

ELTON G. CUSHMAN, Taunton, Mass.



watering an all-the-year-round lawn can be maintained in the Southern States where grasses do not usually thrive.

Price, delivered free in the U. S., 35c. qt., \$1.25 for 4 qts., \$2.00 pk., \$7.00 bu. of 20 lbs.

A GREEN LAWN IN TEXAS.

"At my former home at El Paso I had a lawn of your Sunny South Lawn Grass Seed which under irrigation produced the heaviest lawn I ever saw, necessitating cutting three times weekly in order to make it look trim. I use your Ball-Bearing Lawn Mower."

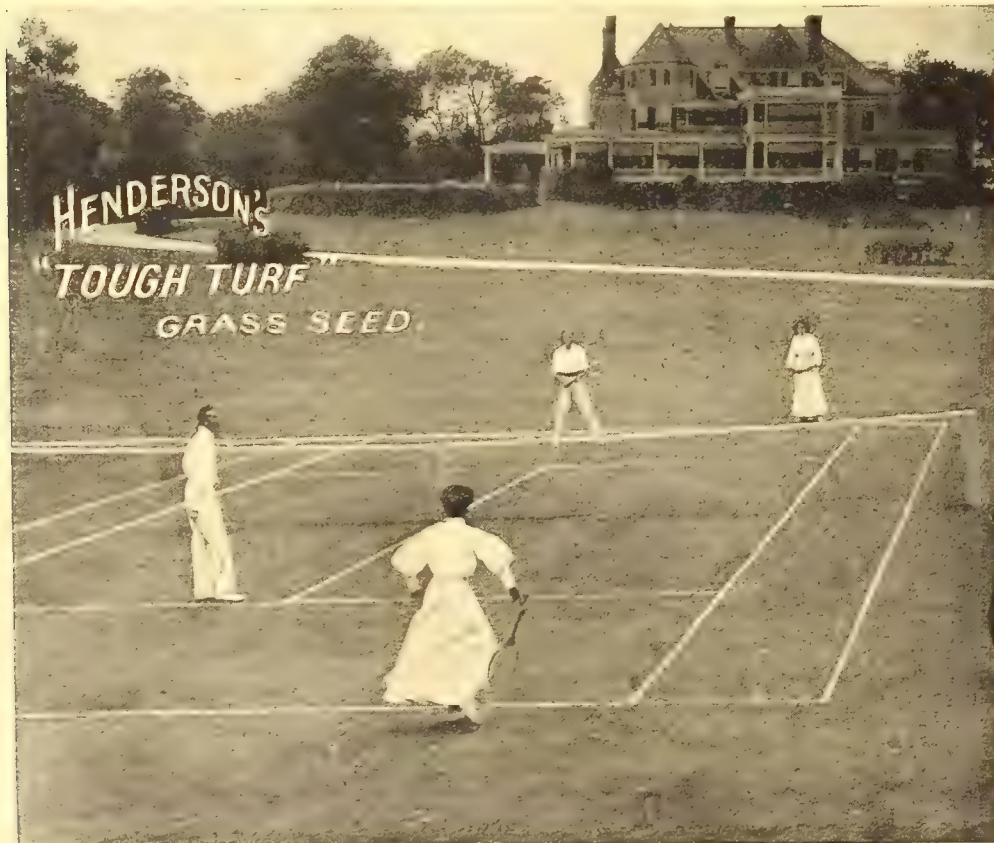
L. H. VANDERWERT, Wilcox, Ariz.

"I have sent you under separate cover photograph showing bird's-eye-view of Tennessee Centennial Exposition grounds, on which we have used exclusively Henderson Lawn Grass Seed. It was sown last September and is now up in good shape, making an elegant lawn for the Exposition."

E. C. LEWIS.

Henderson's "Sunny South" Lawn Grass Seed.

It is especially prepared for the South, and contains all the best grasses that are by nature adapted for hot, dry situations. In the South, Bermuda Grass is frequently used, but it remains green only in the summer months, turning brown in winter, but by using this mixture, and with some care and attention to



Henderson's "Tough Turf" Grass Seed.

For Tennis Courts, Croquet Grounds, Bowling Greens, etc.

It Quickly Forms an Indestructible Turf.

SMOOTH, FIRM, ELASTIC, STANDING WEAR AND TEAR OF OUTDOOR GAMES.

Under congenial conditions it will be ready for mowing four weeks from sowing, and in six weeks ready for playing.

Henderson's "Tough Turf" Grass Seed is a blend of Grasses especially suited for the making of Grass tennis courts, croquet grounds, bowling greens, etc. The turf required for outdoor sports must be closely interwoven, firm, elastic, smooth, and durable to stand the wear and tear. These requirements are met in Henderson's "Tough Turf" Mixture, which is composed of fibrous, deep rooting Grasses that spread and intermingle. The seeds are blended in the proper proportions to form and maintain a tough, matted sward, constantly green, even in dry weather.

These varieties of Grasses being low-growing and fine-leaved, require to be sown liberally if a playing turf is desired quickly; not less than one quart should be used for 300 square feet, or five bushels per acre although fifty per cent more may be used with advantage. Half that quantity will do for renovating. (See engraving.)

Price, delivered free in the U. S., 30c. qt., \$1.00 for 4 qts., \$1.75 pk., \$6.00 bu. of 20 lbs.

"I have a Tennis Lawn of your beautiful 'Tough Turf' Grass seed mixture. It attracts the attention of every passer by, for it is indeed a beauty."

L. A. RICHARDSON, Marine, Ill.

"I purchased some 'Tough Turf' Grass Seed Mixture from you last year. It succeeded admirably, and is very beautiful, keeping green all the year round."

HART F. SMITH, Isleton, Cal.

Henderson's "Shady Nook" Lawn Grass Seed.

On nearly all lawns there are unsightly bare spots under the shade of trees, which have baffled all efforts to get into Grass, but with this mixture there need be no further difficulty. It is a combination of fine, dwarf growing, evergreen varieties, which in their wild or natural state are to be found growing, in the woods or other sheltered and shaded spots. Ground that has been densely shaded by trees is frequently "sour," and if the drainage is defective it is apt to be covered with moss and coarse bog Grasses. In such cases an application of slaked lime, at the rate of one bushel to each thousand square feet, or forty bushels to the acre, is an excellent corrective and sweetener but the moss should be first removed by the use of a sharp rake.

Price, delivered free in the U. S., 35 cts. qt., \$1.25 for 4 qts., \$2.00 pk., \$7.00 bu. of 20 lbs.

"The popular opinion of many is that grass will not grow under the dense shade of the Magnolia tree and I was always of that opinion until I tried your Shady Nook seed. I now have a fine green grass plot and I need not tell you how much it adds to the appearance of the front of my residence."

Dr. EDWIN BENTLEY,
113 East Capitol Ave., Little Rock, Ark.

"On July 15th we seeded many bare spots under the large trees with your shady Nook Grass seed. Now in thirty-five days of midsummer, the spots are closely covered with beautiful green grass greatly admired by all..

D. E. HOWATT,
Forest Hill, Cleveland, Ohio.

Henderson's "Terrace Sod" Lawn Grass Seed.

This is a special mixture of grasses best suited for sowing on terraces, embankments and hillsides. These varieties push forth deep, strong, spreading roots; that bind the soil firmly into a compact turf, which will withstand the heaviest rains. They are all hardy grasses, enduring long periods of drought, they thrive on shallow soils, and can be relied upon to produce a rich velvety-green turf of fine leaved grasses throughout the

season. The great difficulty to be overcome in getting grass established on slopes is to prevent rains washing out the young grass before it is thoroughly rooted. To prevent this, place a continuous run of ten inch boards, set on edge and held in position by stakes, along the crest of the hill. This will check and turn the water to a great extent.

Price, delivered free in U. S., 35c. qt., \$1.25 for 4 qts., \$2.00 pk., \$7.00 bu. of 20 lbs.

"From your Terrace Sod Seed last year I had the finest sod on Terraces you ever saw."

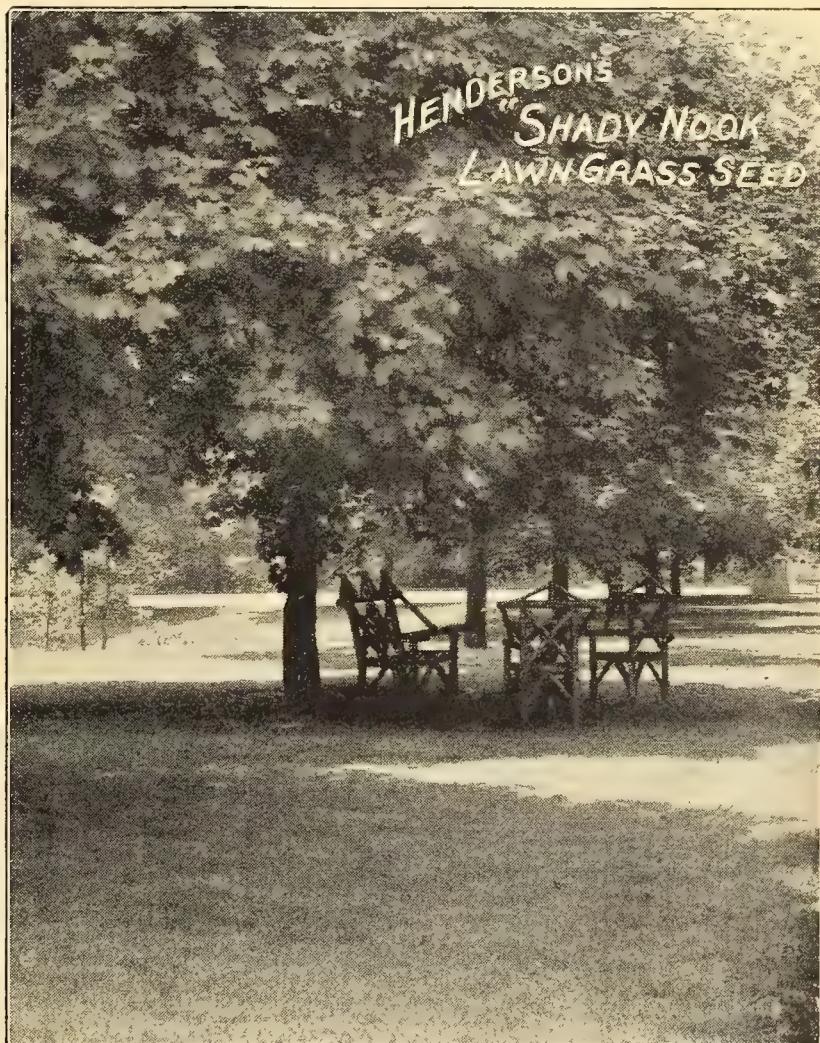
O. M. KIMMEL, Grafford, Pa.

"It affords me great pleasure to state that I have been using Hendersons Shady Nook Lawn Grass Seed under Magnolia and Maple trees for many years with great success. I put on a fresh supply of seed each year and then fertilize it."

Mrs. J. H. MCFERRIN, Collierville, Tenn.

"The Terrace Sod Lawn Grass Seed I had from you last year does well indeed. It holds the soil firmly."

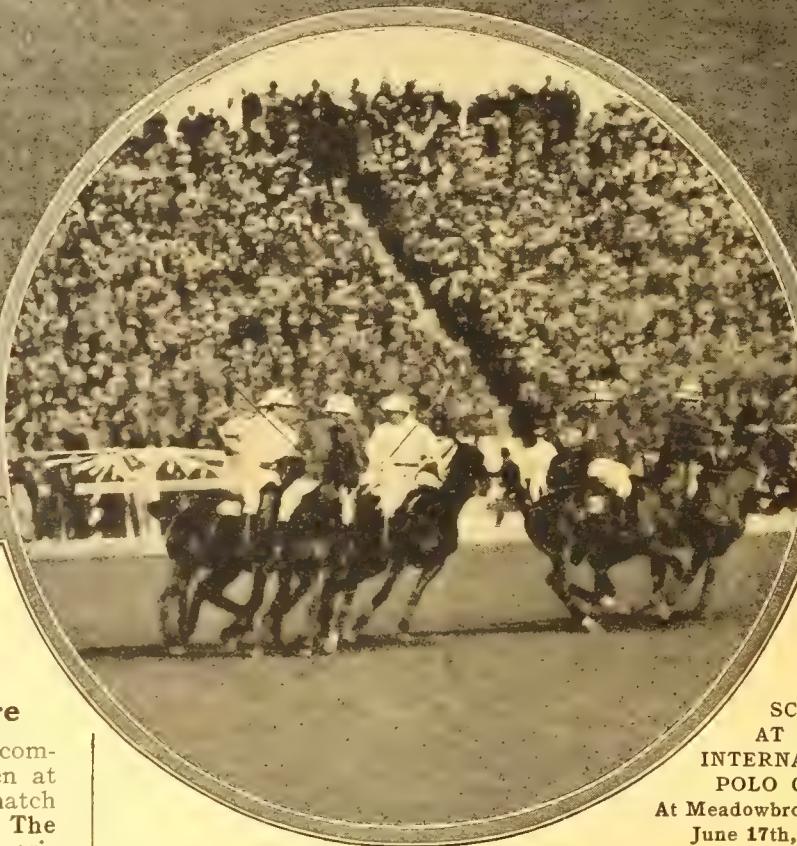
I. H. STEPHENS, Riverton, Conn.





The International Polo Games

At Meadowbrook, L. I., June 13th and 17th, 1914,
were played upon turf produced with the



SCENE
AT THE
INTERNATIONAL
POLO GAME
At Meadowbrook, L. I.
June 17th, 1914

Henderson "Athletic Field" Grass Seed Mixture

Its rich dark velvety-green was the subject of admiring comment of thousands. The illustration is from photos taken at Meadowbrook on the occasion of the famous international match between picked teams representing America and England. The Polo Field and the various lawns at Meadowbrook were originally laid down with the Henderson "Athletic Field" Grass Seed Mixture and have been renovated from time to time with the same mixture. The superintendent has thus been able to maintain at all times a close, compact turf of dark emerald-green (see his testimonial printed below) which has aroused the admiration of thousands. The oblong picture is a view of the grounds being prepared for the game by mowing the Grass with a power mower, which at the same time rolls and smooths the surface. The Grass cuttings were removed later by a small army of men with rakes, leaving a perfectly clean turf. In the circle is a photo of an incident at the opening of the second game, showing a group of the principal players in action.

THE NEW YORK TIMES of June 17th, 1914, describing the contest and the surroundings, says in part, "The crowd was larger than on the first day, and sat tier upon tier around the rolled field which looked for all the world like a great strip of green velvet."

HENDERSON'S "ATHLETIC FIELD" GRASS SEED MIXTURE FOR BASEBALL, POLO AND CRICKET GROUNDS, ETC., ETC.

is a special blend of deep-rooting, fine-leaved, turf-forming Grasses, especially suited for Baseball Grounds, Polo Grounds, Cricket Grounds, etc. This mixture forms a thick strong, enduring turf that will stand any amount of hard usage without showing wear and tear. It grows quickly, and if soil and conditions are at all favorable with attention to rolling and mowing, should be ready for hard use in eight weeks from sowing.

The refreshing green and the close turf—which have attracted the attention of hundreds of thousands of patrons of the principal Baseball Parks and Polo Grounds of the country—were pro-

duced by this special mixture of The Henderson Grass Seed. Among others we may mention the Polo Grounds at Meadowbrook where the famous international match was played last June, Newport, Lakewood, Rockaway Hunt, Saratoga, also some of leading Baseball Parks in the country including the Polo Grounds in New York, Ebbets Field and Washington Park in Brooklyn. (See engraving) Sow 100 to 150 lbs. per acre according to soil conditions. Price, delivered free in the U. S., per lb., 30c.; per 100 lbs., \$25.00.

A 14-YEAR TEST PROVES ITS VALUE
"Our polo Grounds and lawns at Meadowbrook were laid about 14 years ago with the special mixture of THE HENDERSON "ATHLETIC FIELD" GRASS SEED MIXTURE and we have renovated them from time to time with the same mixture. We would not use any other brand. The condition of these grounds at all seasons of the year is the best possible testimonial to the value of your seed. For forming a springy, yet compact turf, that will withstand the hard usage incidental to the game of polo, it is all that can be desired."

JAMES McCROSSAN,
Superintendent, Meadowbrook Club, L.I.

YOUR GRASS SEED MADE OUR CRICKET COURSE FAMOUS

"I have had from you at different times many bushels of 'Henderson's' Special Grass Seed Mixture for use on Cricket Grounds and it has always given excellent satisfaction. In Lawrence we used it on the Merrimack Cricket Club Grounds, and the course had a good name all over the State. Since I have been connected with the Mohair Cricket Club, in Lowell, we have used the same seed with the same result, that our wicket is considered the best in the State."

JOS. W. HARRISON,
Lowell, Mass.

HENDERSON'S GOLF COURSE GRASS SEED

FOR LAYING DOWN NEW COURSES AND RENOVATING OLD ONES.

We have had great experience with, and have given much attention and close study to grasses suitable for Golf Links. When Golf first became a popular game in this country and courses were laid out, it was soon found that many grasses used with good results on European courses would not thrive in the climate of the United States.

We then made exhaustive experiments with every known variety of grass in our trial grounds at Jersey City, N. J., and we also sent samples to various sections of the country for trial and report. As a result of these experiences we made up our now well-known mixtures—**HENDERSON'S GOLF COURSE GRASS SEED MIXTURES** both for Putting Greens and Fair Greens. They are undoubtedly the best for the American climate and American conditions, being composed of thoroughly acclimated varieties, seeds of the highest germinating power only are used. Many of the finest courses in America

today were laid down with these mixtures, and with proper care the finest Putting Greens and Fair Greens in the world can be successfully rivalled. Henderson's Golf Course mixtures are made up to suit the grounds and soil to be seeded, low and wet, high and dry, sandy or clayey, as the case may be, and a description of the soil and notes on climate and the lay of the land should be sent when ordering.

Warning.—The best of seed is necessary for use on Golf Courses and all grounds devoted to sport. We deal only in the highest grades and before offering this seed to our customers for sale, it is thoroughly recleaned by the most modern seed-cleaning machinery in America. These are not ordinary fanning mills, but machines with an even and strong air suction—equal at all points—which is quite a different thing from a blast. By this process we are enabled to eliminate the rubbish, and light imperfect seeds, leaving only sound perfect seeds.

HENDERSON'S "PUTTING GREEN" GRASS MIXTURE.

Price, delivered free in the U. S., 35c qt., \$1.25 for 4 qts., \$2.00 pk., \$7.00 bush. of 25 lbs. Sow at the rate of 5 to 8 bushels per acre according to the nature of the soil.

HENDERSON'S "FAIR GREEN" GRASS MIXTURE.

Price, delivered free in the U. S., 30c. pound, \$25.00 per 100 lbs. Sow 75 to 150 lbs. per acre according to the nature of the soil.

HENDERSON'S GOLF COURSE GRASS SEED

FOR FAIR GREENS AND PUTTING GREENS IS USED ON THE CHAMPIONSHIP COURSES

The finest Courses in America to-day are those on which
Henderson's Grass Seed has been used.

Among which we mention.

Essex County Country Club	..... N. J.
Chicago Golf Club	..... Ill.
Chevy Chase Country Club	..... D. C.
St. Andrew's Golf Club	..... N. Y.
Philadelphia Country Club	..... Pa.
Shinnecock Golf Club	..... N. Y.
Eagle Nest GoflandCountry Club	..... N.Y.
Essex County Club	..... Mass.

Garden City Golf Club	..... N. Y.
Hackensack Golf Club	..... N. J.
Ardsley Golf Club	..... N. Y.
Tuxedo Golf Club	..... N. Y.
Portland Golf Club	..... Ore.
Spokane Golf Club	..... Wash.
St. James' Club	..... Montreal, Can.
Royal Montreal Golf Club	..... Can.
Quebec Golf Club	..... Can.
Merion Cricket Club	..... Pa.

Westchester Country Club	..... N. Y.
Newport Golf Club	..... R. I.
Lakewood Golf Club	..... N. J.
Century Club	..... N. Y.
Knollwood Country Club	..... N. Y.
N. Y. City Public Golf Course	..... N. Y.
Salisbury Golf Club	..... N. Y.
Wilmington Country Club	..... Del.
Homewood Country Club	..... Ill.
Foxhills Golf Club	..... N. Y.

Mohawk Golf Club	..... N. Y.
Apawamis Golf Club	..... N. Y.
Lake Placid Golf Club	..... N. Y.
Richmond Country Club	..... N. Y.
Westfield Golf Club	..... N. J.
Cranford Golf Club	..... N. J.
Haworth Country Club	..... N. J.
Hollywood Golf Club	..... N. J.
Yountakah Golf Club	..... N. J.

PLEASE NOTICE
THAT WE
DELIVER FREE
IN THE U. S.
ALL GOLF AND
LAWN GRASS
MIXTURES
(BY MAIL,
EXPRESS OR
FREIGHT AT
OUR OPTION.)



BERMUDA GRASS SEED.

Sow for the Summer Lawn in the Extreme South.

BERMUDA GRASS is the most important and valuable grass for lawns in the extreme South. A well kept lawn of this grass is a refreshing and beautiful sight. It is of low creeping habit, roots from the stem joints and forms a dense sod. It will grow on almost any soil, thriving best on rich land, but will also thrive on poor sandy land. In moist climates it will grow in nearly pure sand, making a good sand binder and bank holder.

It revels in the heat and direct rays of the sun, remaining green through the long tropical and sub-tropical summers, when any other type of grass adapted for lawns would burn out. Although Bermuda Grass is especially adapted for lawn formation in the extreme South, and may be grown as far north as Richmond, Va., and St. Louis, without being winter killed, yet the further north it is grown the shorter will be its season of green, as the foliage turns brown after the first frost and does not "green" until after frosts cease in spring. For this reason in sections subject to frosts an associate winter grass, usually English Rye Grass, is sown in the fall over the Bermuda Grass lawn after the surface has been scarified. These two associate grasses thus furnish a green lawn the year round in the Southern States. For lawn purposes sow 6 lbs. of Bermuda Grass Seed per acre. It is best sown in the spring, as it germinates best in warm weather.

Price of Seed, 75c. per lb., 100 lbs at 70c. per lb.

ENGLISH RYE GRASS SEED.

Sow for the Winter Lawn in the Extreme South.

This most valuable grass for the North is also particularly useful in sections of the South as an associate with Bermuda Grass where the latter turns brown in the winter. By sowing Rye Grass in the fall right over the Bermuda Grass Sod, and raking and rolling the seed in, a green lawn may be had throughout the winter until warm weather again starts the Bermuda Grass into growth, when the Rye Grass will die out. The ground must be reseeded with Rye Grass each Fall.

Rye Grass is of rapid growth coming up in 8 to 10 days time and soon covers the ground with a dense growth of green grass which if kept mown forms a fine sward. Sow at the rate of 50 pounds per acre.

Price, 16c. per lb.; \$3.50 per bush. of 24 lb.; \$12.00 per 100 lbs.

METHOD OF A GEORGIA CUSTOMER IN MAINTAINING A GREEN LAWN THE YEAR ROUND.

Gentlemen: I enclose you the details of my plan in maintaining a green lawn the year around in this climate, where ordinary grasses burn out in summer. The experiment has been a success in every way, and you may with confidence recommend this plan to your Southern customers.

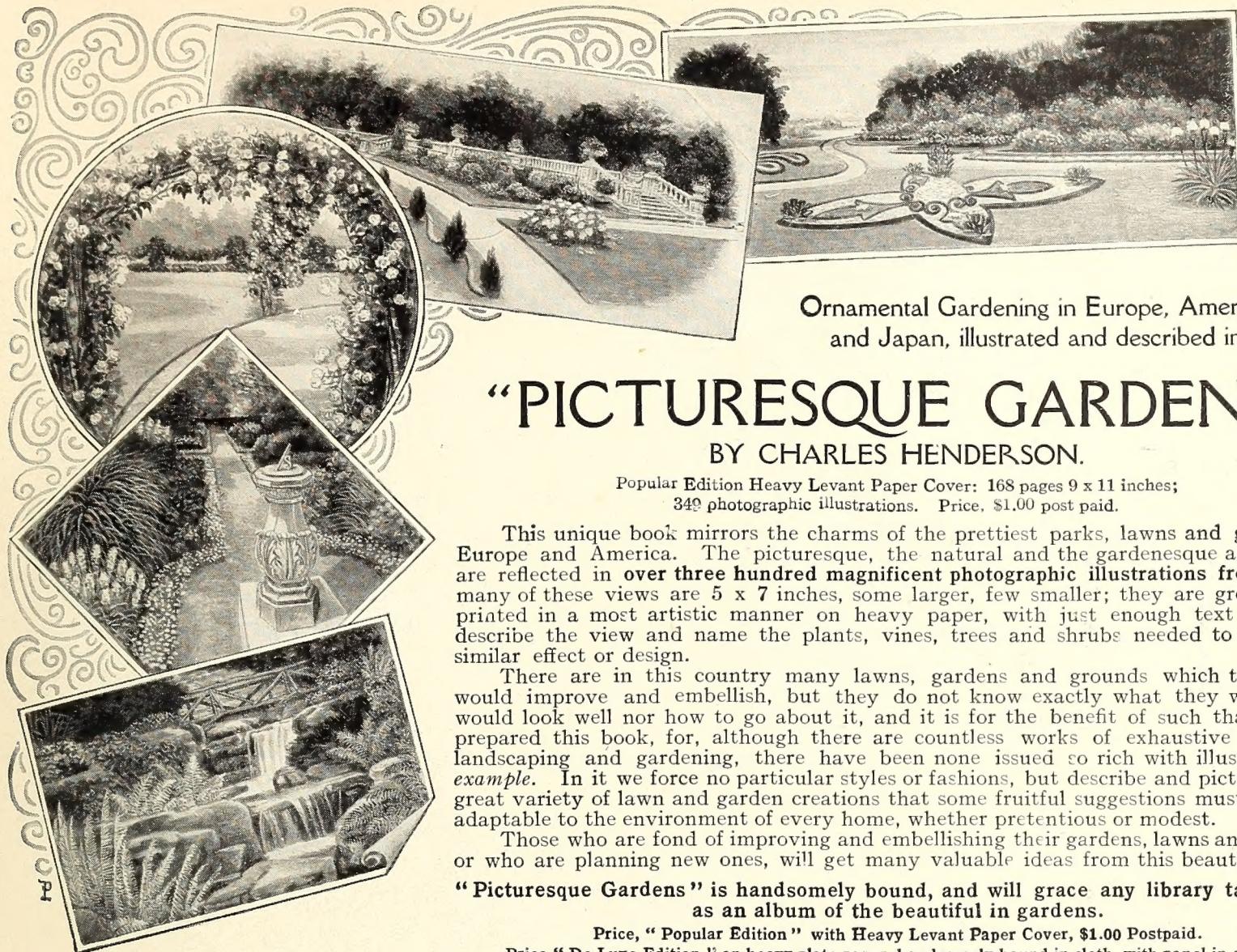
Area $\frac{1}{4}$ acre, sowed with the Bermuda Grass Seed Jan 31st. Our soil is very light with clay subsoil. I put it in good condition, plowing in 200 lbs. Cotton Seed Meal on the $\frac{1}{4}$ acre, sowed with the Bermuda Grass Seed Jan. 31st (6 lbs. per acre). Several subsequent rollings with a light roller had a good effect. On May 4th during a rain broadcasted 12 lbs. of Nitrate of Soda over the $\frac{1}{4}$ acre with good results. This Bermuda Grass Seed gave us a first-class green lawn all summer, it stands mowing and cares for no drought; the first frost kills it to the ground. October 2d I applied a top dressing of rich soil and cotton seed meal and raked in English Rye Grass Seed in the proportion of 50 lbs. per acre and rolled the ground. The latter grass seed comes up in eight days, in six weeks it is a mass of green and gives a good lawn all winter; it dies in May leaving the ground clear for the Bermuda Grass, the roots of which survive in the ground here through the winter.

Quantity to sow per acre.	Weight per bushel.
6 pounds	35 pounds
3 bushels	14 pounds
2 bushels	20 pounds
1½ bushels	21 pounds
3 bushels	24 pounds
3 bushels	14 pounds
2½ bushels	12 pounds
2½ bushels	14 pounds
2½ bushels	12 pounds
3 bushels	14 pounds
2½ bushels	22 pounds
3 bushels	25 pounds
3 bushels	18 pounds
3 bushels	14 pounds
1 bushel	32 pounds
3 bushels	14 pounds
1½ bushels	14 pounds
3½ bushels	10 pounds
2 bushels	14 pounds
8 pounds	60 pounds

Henderson's Recleaned Lawn Grass Seeds.

We are prepared at all times to make up special mixtures of grass seeds, for those who prefer to select their own varieties.

	Prices		
	Per bushel.	Per pound.	Per 100 pounds
BERMUDA GRASS. (<i>Cynodon Dactylon</i> .) Valuable lawn grass for the extreme South, but does not thrive north of Virginia.		\$.75	\$70.00
CANADA BLUE GRASS. (<i>Poa Compresa</i> .) Useful on hard clay and poor gravelly soils; resists drought.	2.75	.22	18.00
CREEPING BENT GRASS. (<i>Agrostis Stolonifera</i> .) Excellent for lawns and putting greens: succeeds well in most situations.	Price on application		
CRESTED DOG'S TAIL. (<i>Cynosurus Cristatus</i> .) Should enter in moderate quantity in lawn and putting green mixtures.	7.75	.40	35.00
ENGLISH RYE GRASS. (<i>Lolium Perenne</i> .) For quick results, it makes a good showing within a month.	3.50	.16	12.00
FESCUE FINE-LEAVED SHEEPS. (<i>Festuca Ovina Tenuifolia</i> .) The finest bladed grass and valuable only for lawns.	Price on application		
FESCUE HARD. (<i>Festuca Duriuscula</i> .) A dwarf-growing grass forming a dense, fibrous mat, succeeding well in dry situations.	Price on application		
FESCUE RED OR CREEPING. (<i>Festuca Rubra</i> .) Forms a close, rich sod, and is valuable in lawn and putting green mixtures.	6.00	.45	40.00
FESCUE SHEEP'S. (<i>Festuca Ovina</i> .) Short and dense in growth. Valuable for lawns and putting greens.	Price on application		
FESCUE VARIOUS-LEAVED. (<i>Festuca Heterophylla</i> .) Valuable in lawn mixtures, forms a close rich sod.	Price on application		
FESCUE MEADOW. (<i>Festuca Pratensis</i> .) Of robust growth and useful in permanent mixtures.	5.00	.25	20.00
FESCUE CHEWINGS NEW ZEALAND. (<i>Festuca Chewings</i> .) This grass is specially recommended for golf putting greens and lawns. Succeeds on all soils.	10.50	.45	40.00
ITALIAN RYE GRASS. (<i>Lolium Italicum</i> .) For quick one-season results; thrives in almost any soil.	3.00	.18	14.00
KENTUCKY BLUE GRASS. (<i>Poa Pratensis</i> .) Does best on lime stone soils in the higher altitudes, gradually making a good turf, but not the first year. Fancy or double extra clean. Though offered at the standard weight of 14 lbs. per bushel, the natural weight of this fancy seed is 20 to 25 lbs. per measured bushel.	3.75	.30	25.00
RED TOP GRASS, FANCY. (<i>Agrostis Vulgaris</i> .) Forms a close sod, thrives on moist clayey soil and even on slightly acid soils, extra recleaned seed free from chaff and weighs 32 lbs. per measured bushel.	7.50	.25	22.00
RHODE ISLAND BENT GRASS. (<i>Agrostis Canina</i> .) Related to the Red Top, but much finer in texture; produces soft velvety turf.	8.00	.60	55.00
ROUGH STALK MEADOW GRASS. (<i>Poa Trivialis</i> .) Adopted for shaded situations, particularly on damp soils.	Price on application		
SWEET VERNAL, TRUE PERENNIAL. (<i>Anthoxanthum Odoratum</i> .) Emits an agreeable odor when the lawn is mown.	Price on application		
WOOD MEADOW GRASS. (<i>Poa Nemoralis</i> .) Of early growth, thriving well under trees; makes a fine close sod.	Price on application		
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